# SECURITIES CLASS ACTIONS OF CHINESE COMPANIES

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## Abstract

This paper provides the first empirical evidence documenting the determinants and outcomes of private securities class action lawsuits filed in the US and Canada against Chinese companies and their auditors. Our findings show that, in the global context, Chinese companies are positively associated with their auditors being defendants and experiencing an adverse outcome (for example, related government enforcement actions and/or settlement payments to terminate class actions). A group of companies from outside the US with low country level audit quality, the Chinese companies, and the overall global sample were compared. For the low country level audit quality comparison group, we found that a restatement was negatively associated with auditors being defendants; this is a new finding. Two unique Chinese characteristics are that reverse mergers are positively associated with auditor litigation and bankruptcy has no association with auditor litigation. Aggregate Chinese companies' settlements are positively associated with the occurrence of an auditor settlement and with class period length. Auditor settlements are associated with several factors. No mainland China CPA firm has ever paid to settle a private securities class action filed in the US or Canada; this also is a new finding. Several factors explain this last result.

**Keywords:** China, Hong Kong, Securities Class Actions, Auditor Litigation, Audit Quality, Reverse Mergers.

## 1. INTRODUCTION

Prior research on Chinese companies' securities class actions in the US and Canada has been limited to anecdotal evidence. This paper discloses for the first time the determinants and outcomes of these class actions against Chinese companies and, in particular, their auditors, based on empirical evidence.

Analysis of these securities class actions provides insight into many controversial issues. Investors in the US and Canada that invested in Chinese[1] companies have sometimes felt that they were treated unfairly because there were forced to rely upon poor accounting and auditing, which was enabled by regulators and a legal system that has been unable to effectively cope with these problems. Conversely, the Chinese have sometimes felt these criticisms to be less than fully justified, and that their economic and political needs, including respect for their sovereignty, must not be ignored.

Examination of these securities class actions is also helpful in gaining insight regarding how Chinese companies become public companies in the US or Canada. Many of them have used what is called a reverse merger ("RM") transaction as a method of becoming public, rather than utilizing an initial public offering ("IPO"). Some believe that there is no problem with Chinese companies' accounting and auditing and that the problem is confined to companies (not necessarily Chinese) that utilize an RM transaction. Our inclusion in the study of all Chinese companies, whether they went public via an RM, via an IPO, or via another method, provides insight into this aspect of the controversy.

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[1] In this paper, we use interchangeably the terms Chinese, China and the PRC. We use the term Hong Kong to refer to the Hong Kong Special Administrative Region of China.

Our investigation of lawsuits against companies worldwide showed that Chinese companies are positively associated with auditors being named defendants and experiencing an adverse outcome (for example, related government enforcement actions and/or having to pay to settle the class action).

Our analysis of a group of companies from low audit quality countries outside the US, Chinese companies, and the overall sample, revealed several findings different from what has been observed in prior auditor litigation research. In the group of companies from low audit quality countries outside the US, restatements were negatively associated with auditor litigation; in prior research, restatements have always been positively associated with auditor litigation. In an analysis of the Chinese companies, a US small CPA firm auditor, fraud, and reverse mergers were positively associated with auditor litigation and company size was negatively associated with auditor litigation. However, bankruptcy is not associated with auditor litigation.

Furthermore, we performed a detailed analysis of the Chinese companies' settlements. Our results show that aggregate settlements are positively associated with the occurrence of an auditor settlement, the class period length, and the company has become public via a reverse merger. Auditor settlements are positively associated with fraud, class period length, the company letting a default judgment be taken against it, and the use of a large CPA firm in the US or Canada. Auditor settlements are negatively associated with the use of a CPA firm from the mainland of China – such auditors have never paid to settle a securities class action filed in the US or Canada. Auditor settlements are also negatively associated with the use of a small CPA firm from the US or Canada.

The rest of this paper is organized as follows. The following section discusses background information and the related literature: auditors in securities class actions, audit quality, RM's, and transnational litigation in US courts. The third section presents our research questions and methodologies. The following two sections describe data and present our findings. In the last section, we discuss our conclusions and their implications for future research. The paper ends with an Appendix detailing the empirical analysis.

## 2. BACKGROUND AND PRIOR LITERATURE

### 2.1. Auditors in securities class actions

A private securities class action is typically multi-defendant litigation, with auditors being named defendants only in a minority of the lawsuits. Typical defendants are companies, the management, and members of the board of directors. Other defendants may include underwriters, law firms and the auditors. The fate of the auditor (whether he will be named a defendant and, if so, how bad an outcome he will experience so far as related government prosecutions and/or payments required to settle the class action) partly hinges on the strength of the evidence presented on two issues. First, was the accounting of the company in its financial statements legally deficient? If there is a lack of strong evidence that the accounting was legally deficient, then the nature of the auditing is irrelevant. Otherwise, the second issue becomes important: was the auditing performed by the CPA firm legally deficient?

The "accounting" of the company and the "auditing" of the auditor are constructs. The necessarily imperfect measures of these constructs are the following. A restatement is when a company disavows its previously issued financial statements and then republishes them, by filing them with the securities regulator (for example, the SEC in the US, or the Ontario Securities Commission in Ontario, Canada), replacing the prior financial statements. This has been regarded as an operationalization, when it occurs, of legally deficient accounting. A weakness of this measure is that sometimes companies whose financial reporting is obviously materially incorrect to deregister or for other reasons never actually restate their financial statements. For instance, Srinivasan et al. (2015) find that the restatement rate of U.S.-listed foreign firms from weak rule of law countries (for example, China) is lower than that of comparable US firms. They find that this is not due to higher quality financial reporting but instead due to lower quality financial reporting. US-listed foreign firms from weak rule of law countries more frequently fail to report restatements in situations where they should have reported a restatement.

When annual financial statements are restated, it has additionally been regarded as an operationalization of legally deficient auditing, since annual financial statements are audited by auditors. However, management of the company is primarily responsible for the company's financial reporting. The auditor's only responsibility is to perform an audit that is not legally deficient. An audit only provides reasonable assurance that the financial statements are materially correct. Nevertheless, restatements of audited annual financial statements have almost always been found in prior research to be positively associated with auditor litigation (Habib et al., 2014).

Another measure of legally deficient accounting is class period length. This is the period during which allegedly legally deficient accounting was relied upon by users of the financial reporting of the company, causing losses to the investors. Class period length can be unilaterally alleged by the plaintiff in some lawsuits while collaboratively agreed upon, for settlement purposes, by the plaintiffs and the defendants in others. Thus, this could lead to some inconsistency in this measurement. Nevertheless, class period length is a measure of legally deficient accounting because, all things considered, the longer the duration of the allegedly legally deficient accounting, the more likely it actually was a legally deficient accounting that economically damaged the investors. Also, the longer the duration of the allegedly legally deficient accounting, the more likely legally deficient auditing occurred. Thus, class period length, like a restatement of annual financial statements, is a measure of both legally deficient accounting and legally deficient auditing. Class period length has almost always been found in prior research to be positively associated with auditor litigation (Habib et al., 2014).

An additional measure of legally deficient accounting is what is generally termed "fraud" in the auditor litigation literature: the occurrence of a related government enforcement action against the company, management or anyone else who was

involved with the financial reporting of the company. Evidence of fraud could be a civil prosecution by the Public Company Accounting Oversight Board ("PCAOB"), SEC, Ontario Securities Commission or another regulator, or a criminal prosecution by the US Department of Justice or another criminal prosecutor in another country (such as the criminal prosecutor in Italy re the Parmalat case). A limitation of this measure is that investigations by the PCAOB often originate with information obtained through the PCAOB inspection program (PCAOB, 2016a). Only some of the small CPA firms in Hong Kong and no CPA firms in mainland China participate in the PCAOB inspection program. Thus, the operationalization for fraud may relatively understate the presence of fraud among the CPA firms in mainland China and relatively overstate the presence of fraud among the other CPA firms.

Fraud is a measure of legally deficient accounting because governmental attorneys usually initiate prosecutions only when the evidence is so overwhelming that they will probably prevail. They leave the less clear and easy cases for the private securities class action attorneys.

Fraud is also a measure of legally deficient auditing because if a case is characterized by overwhelming evidence that legally deficient accounting occurred, it is unlikely that an auditor can be excused for not detecting and reporting it. Fraud has almost always been found in prior research to be positively associated with auditor litigation (Habib et al., 2014). Owing to the continuing progress in economic reforms and legal system since the mid-1990s, Chinese auditors are pressured to consider their responsibility for fraud detection and reporting (Lin, 2004).

Bankruptcy is a measure of the unavailability of assets of the company to contribute to a settlement of a private securities class action, and a concomitant increase in motivation based on "deep pockets" to extract assets from the auditor. In prior research, before significant Chinese companies' (that listed in the US or Canada) data were available, it was always assumed that only financial distress, measured by a bankruptcy, could cause the unavailability of assets of the company to contribute to a settlement of a private securities class action. In prior research, bankruptcy has almost always been found to be positively associated with auditor litigation (Habib et al., 2014).

## 2.2. Audit quality

In the immediately preceding section, it was noted that in prior research, annual restatements, class period length, fraud, and bankruptcy have been positively associated with auditor litigation. Another measure relating to the construct of audit quality will now be discussed. If a CPA firm provides a high-quality audit, it is less likely that legally deficient auditing occurred, and it is less likely that auditor litigation will occur. Thus, the use of a large CPA firm auditor, the measure for audit quality used in most prior research, has almost always been found to be either negatively associated with auditor litigation, or, it has been found to have no significant association (Habib et al., 2014). Audit quality has been thought to be comprised of competence and independence, and the large CPA firms have more independence because they do not

economically dependent on anyone audit client (DeAngelo, 1981a; DeAngelo, 1981b; Watts & Zimmerman, 1981). The large audit firms usually emphasize more on in-depth industry knowledge (Gramling & Stone, 2001; Habib, 2011).

However, no prior research had substantial numbers of litigation observations of companies from outside the US. In contrast, 19% of this study's observations are from outside the US. A two-category large vs. non-large auditor type classification now needs to be refined. Brown et al. (2014) created a country level audit quality index that Preiato et al. (2015) found credible, as it correlates with financial reporting quality in the capital markets, measured by the amount of error in analysts' consensus forecasts and the extent of disagreement among analysts, as indicated by forecast dispersion. The audit quality of CPA firm audit engagement teams with offices in the US, the United Kingdom ("UK") and Canada is higher than that of CPA firm audit engagement teams with offices in China and certain other countries (Brown et al., 2014). Foreign auditors subject to PCAOB inspections (the only major country where the government prohibits PCAOB inspections in China[2]) provide higher quality audits than auditors in foreign countries where the government prohibits PCAOB inspections (Lamoreaux 2016).

Following Carcello et al. (2014), we use a four-category auditor type classification: the 8 largest CPA firms (the only ones which are all annually inspected by the PCAOB[3]) with audit engagement teams based in offices located in the US (and Canada in some analyses), the 8 largest CPA firms with audit engagement teams based in offices located in the home country of the company, the smaller CPA firms with audit engagement teams based in offices located in the US (and Canada in some analyses), and the smaller CPA firms with audit engagement teams based in offices located in the home country of the company. We expect an ordered strict monotonic decrease in audit quality among these four auditor types, with the highest audit quality auditors being the 8 largest CPA firms (the only ones which are all annually inspected by the PCAOB) with audit engagement teams based in offices located in the US (and Canada in some analyses).

## 2.3. Reverse mergers

The two most common methods for a privately held company to become publicly held are IPO's and RM's. An RM is a stock swap technique through which a privately held company is acquired by a publicly held company. The name "reverse" comes from the fact that it is the privately held company which survives. There have been some successful companies such as Berkshire Hathaway, Texas Instruments, and Occidental Petroleum that became public via an RM (Feldman & Dresner, 2009). On the other hand, since many of the Chinese companies

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[2] China prohibits PCAOB inspections of auditors located in mainland China. China allows PCAOB inspections of auditors located in Hong Kong, unless the audit work relates to operations in mainland China (PCAOB 2015). Reportedly, the PCAOB may soon be provided audit documentation of Baidu and Alibaba. However, there is doubt whether the documentation provided will be complete and unredacted. There also is uncertainty whether audit documentation of other Chinese companies will be provided to the PCAOB (Gillis 2016).
[3] The 8 CPA firms that were consistently annually inspected from 2004 to the present are BDO (fka BDO Seidman), Crowe Horwath, Deloitte & Touche, Ernst & Young, Grant Thornton, KPMG, PricewaterhouseCoopers and RSM (fka McGladrey & Pullen) (PCAOB 2008, 2016).

that chose to list in the US or Canada have been alleged to be characterized by poor accounting and/or auditing, and many (half of the Chinese companies in this study) became publicly held via an RM, researchers have begun to examine RM's.

Companies, regardless of their nationality, that become public via an RM rather than via an IPO are riskier and have worse financial reporting that the companies that list in the US via an IPO (Givoly et al., 2012; Jindra et al., 2015; He et al., 2012). This is due to the following two reasons. First, RM companies do not have an underwriter and generally use lower quality transaction attorneys and auditors. To what extent a company actually chooses an RM (instead of an IPO) rather than has an RM imposed upon it due to circumstances beyond its control is beyond the scope of this study[4]. Second, the financial reporting disclosure surrounding an RM is limited to the issuance of an 8K, which is far less than an IPO's registration statement and prospectus.

Almost all prior research on RM's, with the exception of Chen et al. (2016) ignores the length of time from the RM transaction to the event of interest. Logically, the negative impact of an RM should dissipate over time as the periodic financial reporting of the company (10K's, 10Q's, 20F's, 6K's, etc.) becomes more relevant than the manner in which the company went public. Chen et al. (2016) found limited evidence (based on 21 Chinese RM companies) supporting this logic. In our research, we not the only document for each company whether it went public via an RM – we also keep track of the length of time from the RM transaction date to the lawsuit commencement date.

Ghosh and Peltier (2015) attribute the perception of poor accounting and auditing of the Chinese companies that list in the US and Canada solely to the Chinese RM's. However, Baker et al. (2017) find that Chinese RM's report ineffective internal controls but underreport the existence of ineffective internal controls more frequently than US RM's. Baker et al. (2017) also report the same finding when they compare Chinese IPO's to US IPO's. Also, the disclosure of fraudulent financial reporting by Chinese companies, the PCAOB's inability to inspect Chinese auditors, and the inability of the SEC to obtain audit documentation directly from Chinese auditors, all precipitated negative stock market reactions among Chinese IPO's as well as Chinese RM's (Darrough et al., 2015; Carcello et al., 2014)[5].

### 2.4. Non-US defendants in US courts

As was mentioned above, a major innovation with this auditor litigation study is that it is the first that is significantly transnational (19% of the companies are from outside the US)[6]. Whether the transnational character of the litigation challenges assumptions based on prior findings grounded on overwhelmingly domestic litigation is an empirical question which

we address, both in general and, in particular, depth, with regard to Chinese companies.

Non-US defendant companies, CPA firms, and individuals pose greater difficulties for the plaintiffs than US defendant companies, CPA firms, and individuals. These difficulties are due to the following reasons. Non-US defendants may be more difficult to serve process on. Without service of process, a plaintiff cannot motivate a defendant to participate in the litigation by responding to the complaint, or by responding to requests for documentary or oral evidence. Problems with service of process on non-US defendants and obtaining evidence from them vary depending upon the citizenship or residency of the non-US defendant, despite the existence of the Hague Service Convention and the Hague Evidence Convention. Although most countries are signatories, some opt out of provisions they do not want to comply with.

Since 1997 Hong Kong has maintained a system of law for purposes of transnational litigation that has been described as similar to that of the United Kingdom (Lukken, 2017). In contrast, the mainland of China is the most difficult jurisdiction for transnational plaintiffs with regard to service of process and obtaining evidence from defendants[7]. US courts have the authority and sometimes use it to allow a mode of service of process that China disapproves of, such as via postal mail, email, private process server, or by service on the US law firm of the defendant. Mainland Chinese companies can easily be served process because they must appoint an agent in the US for service of process. Sometimes US courts will allow service of other defendants by service on this agent. However, this allowance of the US courts does not often help the plaintiffs.

If obtained, judgments of US courts are more difficult to enforce (in other words, actually collect the money) against non-US defendants, especially if the plaintiffs did not use the method of service of the process clearly authorized by the Hague Service Convention. If the non-US defendants do not have assets in the US, the assets must be pursued abroad. China, Hungary, Sweden, Turkey and the United Arab Emirates, among others, do not enforce tort judgments of US courts (Practical Law, 2014). Many other countries will not enforce default judgments, which is what is deemed to have occurred in a US court when a defendant takes no affirmative step in his or her defence. As a practical matter, it is seldom possible to enforce a US court judgment other than in the US, the UK, South Korea or Canada (Harris, 2010).

Indirectly, it is also more difficult for plaintiffs to prevail against some non-US defendants because the plaintiffs are unable to take advantage of PCAOB inspections and SEC enforcement actions. China is the only major country that disallows PCAOB inspections of its CPA firm auditors (if they are on the mainland or audited a company with operations on the mainland). PCAOB inspections may lead to SEC investigations (PCAOB, 2016a). China also is the only major country that purportedly directs its CPA

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[4] For example, it may sometimes be the case that underwriters, and higher quality transaction attorneys and auditors refuse to work with such companies either because they are perceived as prone to business and financial reporting failure, or the company will not pay large enough fees to satisfy underwriters, and higher quality transaction attorneys and auditors.
[5] While the majority of papers present a negative view of Chinese RM's, Lee et al. (2015) present a positive view of Chinese RM's, reporting that they outperform US RM's.
[6] Gande and Miller (2012) examined only lawsuits against companies from outside the US. Cheng et al. (2014) compared lawsuits commenced through 2010 against US companies to companies from outside the US but only in the aggregate, with only 8% of the lawsuits against companies from outside the US. Auditor litigation was not included in either of these papers.

[7] China has made declarations regarding how transnational service of process may be effected and how evidence may be obtained from defendants. In Hong Kong, service by the Other Authority (Chief Secretary for Administration of the Hong Kong Special Administrative Region Government), by mail, or by personal service, is clearly authorized. It is routine to obtain judicial assistance to compel the acquisition of evidence. In Mainland China, service by the Central Authority (Ministry of Justice in Beijing) is usually the only clearly authorized method of transnational service of process, and it is almost impossible to acquire judicial assistance to compel the obtaining of evidence (Hague Service Convention and Hague Evidence Convention).

firm auditors (if they are on the mainland or audited a company with operations on the mainland) not to release audit documentation and testimony directly to the SEC, obstructing its investigations (SEC 2015; Wall Street Journal, 2015)[8]. The evidence obtained by the SEC may subsequently be acquired by the plaintiffs via discovery in a private securities lawsuit (D'Addario v. Geller, 129 Fed. Appx. 1,7 4th Cir. 2005).

## 3. RESEARCH QUESTIONS AND METHODOLOGIES

Based on our discussion in Section 2, we expect that Chinese companies coming to the US and Canada to list are associated with a high risk of securities class actions (Starykh and Boettrich, 2016). This leads to our first research question *RQ₁: Is auditor litigation risk associated with Chinese companies coming to the US and Canada to list?* We answer this empirical question with a polytomous regression on our full data set of 2,254 observations of private securities class actions in the US and Canada against companies from all countries. We use a five-category dependent variable, more appropriately measuring the continuum of outcomes an auditor can experience when the company's financial reporting that he audited is the catalyst for a securities class action (Francis, 2011). Variable definitions are provided in Table 2 (see Appendix).

For the auditor type construct, we use the four measures (three express and one implicit, as a reference variable) described above in Section 2.B. For the company country construct, we have eight measures (seven express and one implicit, as a reference variable), as shown in Table 1 (see Appendix). We include a reverse merger variable and a company size variable (measured by the natural log of total assets). We also include the four variables almost invariably found in prior research to be positively associated with auditor litigation: bankruptcy, class (period length), fraud, and restatement (of annual financial statements).

Our variable of primary interest is China. As discussed earlier, we expect the China variable to have a positive association with auditor litigation. Few of the Chinese companies are audited by large CPA firms with engagement team offices located in the US; only such CPA firms are, without exception, annually inspected by the PCAOB. Carcello et al. (2011) find that PCAOB inspections are associated with an improvement in audit quality among large CPA firms with engagement team offices located in the US. Also, the Brown et al. (2014) country level audit quality score for CPA firms with engagement team offices located in Mainland China is the lowest of any major country, as shown in Table 5 (see Appendix).

As we have mentioned above, this auditor litigation study is the first comprised of a substantial portion (19%) of the companies being located outside the US. All of the companies outside the US are like the Chinese companies in that they pose potentially greater difficulties for plaintiffs due to potential service of process, obtaining evidence, and enforcement of judgment problems than the US

companies. A subset with 109 of these transnational defendants (the "Other country companies") are especially similar to the 143 Chinese companies since their countries, as measured by Brown et al. (2014), are also characterized by low country level audit quality (see Table 5 in Appendix).

This leads to *RQ₂: Are the Other country companies' patterns of litigation, the Chinese companies' patterns of litigation, and the overall (full data set of 2,254 observations) patterns of litigation similar or different?* We answer these questions with a polytomous regression on our subset of 109 Other country companies and another polytomous regression on our subset of 143 Chinese companies. These regressions have the same set of variables as described above, except for a lack of country variables. We expect that bankruptcy, class period length, and fraud, are all positively associated with auditor litigation, in our analysis of the Other country companies.

We are less certain about the expected results using our subset of 143 Chinese companies, but we do have two. We do not expect bankruptcy to be significant because mainland Chinese companies, members of the management team, and members of the board of directors are often able, without filing for bankruptcy, to keep their assets from being available to the plaintiffs. They are able to do this because of China's less favourable (to plaintiffs) position on service of process, obtaining of evidence, and enforcement of judgment issues, with regard to mainland China defendants. We expect the smaller CPA firm auditors with audit engagement team offices in the US to be positively associated with auditor litigation because they have sometimes rubber stamped the audit procedures performed by Chinese auditors residing in China, failing to (as auditing standards require) carefully supervise the work performed (Carcello et al., 2014; Koep, 2012).

Our next two research questions focus on the settlements of the private securities class actions involving the Chinese companies. *RQ₃: What factors explain the aggregate (by all the defendants) settlements of the Chinese company securities class actions?* We extend the list of variables by including those related to service of process and default judgments in logistic and multiple linear regressions[9] because these hindrances to the success of the plaintiffs may provide incremental explanations for the settlements. However, due to the small sample size (reduced to 131, as 12 observations lack company defendants needed for the service of process and default judgment variables required for the analysis), we limit the variables to those that occur with at least double-digit frequency and with correlation no greater than .75. We also add the presence of an auditor settlement as a variable because it was reported to be positively associated with aggregate settlements (Bulan et al., 2014). We expect a positive association between settlements and Class period (Starykh & Boettrich, 2016). We also expect Fraud and the natural log of total assets to be positively associated with aggregate settlements (Palmrose & Scholz, 2004). Finally, because of the one country, two

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[8] Campbell and Campbell (2016) assert that sometimes Chinese defendants incorrectly claim that the Chinese government or Chinese law prohibits the submission of certain evidence (usually because the evidence is purportedly "state secrets") to private plaintiffs or to the SEC when in fact they do not. Campbell and Campbell (2016) cite as one of their examples the SEC demand that Deloitte Touche Tohmatsu produce audit work papers and other documentation to assist in its Longtop Financial Technologies Limited investigation of financial reporting fraud (SEC 2014).

[9] Both modes of regression analyze settlements, but in different ways. Multiple linear regression has the dollar amount (zero if there was no settlement) as a continuous dependent variable and the results are influenced by the size of the settlement. Logistic regression has a binary dependent variable where 1=settlement occurred and 0=settlement did not occur. The size of the settlement has no impact on the result. Using both of these modes of regression provides a thorough analysis.

systems nature of the law governing transnational litigation in Hong Kong, we divide the Chinese auditor types into mainland China and Hong Kong for settlement analysis[10].

*RQ$_4$: What factors explain the auditor settlements?* The same variables are used (except for the auditor settlement variable) in the auditor settlement logistic and multiple linear regressions as those used in the aggregate settlement regressions. We expect that the mainland China auditors will use their advantages in service of process and withholding of evidence, relative to the large CPA firm auditors with engagement team offices located elsewhere and thus will be negatively associated with the auditor settlements. We also expect company default judgments to be positively associated with the auditor settlements, as they are in the Chinese company context analogous to the bankruptcy of the company defendant in prior auditor litigation research.

## 4. DATA SOURCES

From Securities Class Action Services ("SCAS"), we obtained most of the sample of 2,254 securities-related financial reporting lawsuits filed against companies from 2001 through 2014. We then searched Audit Analytics to determine which lawsuits had related restatements (correction of an error or a fraud). Bankruptcy data was obtained from Audit Analytics and LexisNexis. Fraud data was obtained from LexisNexis and websites, including those of the SEC, the PCAOB, and the US Department of Justice. We gathered total assets data from Audit Analytics, the SEC, company websites and, for companies registered in Canada but not the US, the System for Electronic Document Analysis and Retrieval (SEDAR).

Our data on the settlements of the Chinese companies was obtained from SCAS. We obtained our data on service of process and default judgments from the docket sheets and litigation documents posted to Public Access to Court Electronic Records for the US lawsuits and from the associated lawyers for the Canadian lawsuits. Data on auditor inspections were obtained from the PCAOB.

The main data source for companies that became public via an RM was PrivateRaise. Also, we used the RM data of Darrough et al. (2015) and Siegel and Wang (2012). Then, for companies which had not yet been identified as having gone public via an RM, we searched the SEC filings of our litigation observation companies in Audit Analytics to find evidence of an IPO. If we found no IPO, we then searched for a description of how the company became public and identified additional companies that became public via an RM. For RM companies, we obtained from their SEC filings the date of the RM transaction. For RM companies that registered in Canada but not the US, we obtained this data from SEDAR.

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[10] Hong Kong's autonomy with regard to its law is provided for in the Hong Kong Basic Law, Hong Kong's mini constitution, which was written in the context of the former colony's return from the United Kingdom to China in 1997. It provides for an independent judiciary and a legal system similar to what existed in 1997. The Basic Law of Hong Kong also focuses on preserving Hong Kong's existing system of capitalism in place before the handover in 1997. Hence, it has a requirement to provide an appropriate economic and legal environment for the maintenance of the status of Hong Kong as an international financial center.

## 5. RESULTS

Figure 1 and Table 1 (see Appendix) depict the trends graphically and numerically of the full sample of 2,254 lawsuits commenced from 2001 to 2014. The largest number of companies are from the US (1,836), China (143), and Canada (80). The 109 "Other" countries are detailed in Table 5a (see Appendix). The year 2011 was the peak year for Chinese companies (56), but Chinese companies have thereafter each year been in the plurality among the non-US companies. Table 2 (see Appendix) includes variable definitions.

Descriptive statistics (including univariate analysis) on the independent variables used in the analyses of the full data set (n=2,254) are provided in Table 3 (see Appendix). The first four variables correspond to the four types of auditors. Small CPA firm auditors with engagement team offices outside the US (AuNB8NUS) as well as small CPA firm auditors with engagement team offices in the US (AuNB8US) are both positively associated with being named defendants and experiencing an adverse outcome (for example, related government enforcement actions and/or settlement payments to terminate class actions) in the lawsuits.

The four variables almost invariably found in prior research positively associated with the auditor being named a defendant and experiencing an adverse outcome in the lawsuits (Bankrupt, Class, Fraud, and Restate) also have that relationship in the full data set. There are 8 country variables, with "Other" being the aggregate of 109 countries not captured by Bermuda, Canada, China, France, Israel, the UK or the US. No country variable has a positive association with the auditor being named a defendant and experiencing an adverse outcome in the lawsuit except for China and Other.

The natural log of total assets has a negative association with the auditor being named a defendant and experiencing an adverse outcome in the lawsuit. The reverse merger variables, regardless of whether RM2, RM4, RM6, RM8, RM10 or RM12 is used to define when to code a reverse merger as present (see Table 2 in Appendix)), are all positively associated with the auditor being named a defendant and experiencing an adverse outcome in the lawsuit.

Descriptive statistics (including univariate analysis) for the Chinese companies (n=143) are provided in Table 4 (see Appendix). The first five variables correspond to the five types of auditors in the analyses of the settlements of the 131 Chinese companies (for which we have the requisite data) in Tables 7, 8, 13, 14 and 15 (see Appendix). Small CPA firm auditors with engagement team offices in the US or Canada (AuNB8USCan) are positively associated with being named defendants and experiencing an adverse outcome in the lawsuits. Conversely, large CPA firm auditors with engagement team offices in the Mainland of China (AuB8ChinaM) are negatively associated (at a one percent level of significance) with being named defendants and experiencing an adverse outcome in the lawsuits. Also, large CPA firm auditors with engagement team offices in Hong Kong (AuB8HKSAR) are negatively associated (at a five percent level of significance) with being named defendants and experiencing an adverse outcome in the lawsuits.

**Figure 1.** Frequencies of lawsuits by country



Near the bottom of Table 4 (see Appendix) are shown the six places of incorporation of the Chinese companies. As has been shown in prior research, Chinese companies that become public company registrants in the US occasionally are incorporated in the Mainland of China (China Life Insurance Co., Ltd. and PetroChina Company Limited) or in Hong Kong (CNOOC Limited). However, they usually choose other places to incorporate. If the company became a US registrant via a reverse merger, they usually become a company with US incorporation (80 companies in our study) since most companies available for executing a reverse merger with are incorporated in the US. If the company becomes a US or Canadian registrant via an IPO, they usually choose to incorporate in the Cayman Islands (36 companies in our study) or in the British Virgin Islands (15 companies in our study). Thus, prior research does not focus on the place of incorporation to determine if a company should be categorized as Chinese but in the place where the majority of business operations occur. Other factors that may be considered include the location of the pre-reverse merger company (if a reverse merger transaction was utilized), the principal executive office of the company, or the nationality of the individuals or entities that have a controlling interest in the company.

A reverse merger (RM) is positively associated with auditors being named defendants and experiencing an adverse outcome in the lawsuits. As we noted above, a Chinese company that uses a reverse merger to go public in the US, usually coincidentally becomes incorporated in the US. Thus, if a researcher encounters multicollinearity issues and cannot include in multivariate analysis both reverse mergers and place of incorporation as variables, the choice is clear. The reverse merger must be retained as a variable and place of incorporation must be jettisoned. In the China company (n=143) data set, a reverse merger (RM) and US place of incorporation (Inc.US) are almost coterminous. Among the 80 RM observations, 74 (93%) are Inc.US. Among the 80 Inc.US observations, 74 (93%) is RM. Conversely, a reverse merger (RM) and Cayman Islands (Inc.Cayman) are almost not coterminous. Among the 80 RM observations, 1 (1%) is Inc.Cayman. Among the 36 Inc. Cayman observations, 1 (3%) is RM.

In order to better understand the Chinese companies, we created a comparison group of companies. We first used Brown et al. (2014) to determine the country level audit quality of the companies in our data set. As shown in Table 5 (see Appendix), the Other countries group has on average a low audit quality – lower than all the individual countries except for China. Also, the Other countries group has all non-US defendants with 109 observations, a sample size fairly similar to that of the Chinese companies. This makes them more comparable to the Chinese companies than the US companies, along with the inherently more difficult transnational service of process, obtaining of evidence, and enforcement of judgments matters, as discussed above. Table 5a (see Appendix) provides details on the country level audit quality as determined by Brown et al. (2014).

The 4 right columns in Figure 2 show the Outcome scores by auditor type for the Other country companies. The 4 left columns show the corresponding scores for the Chinese companies. The lower the Outcome score, the less severe litigation result experienced by the auditor. Based on our discussion in Section 2, we expect to see a monotonic increase in the Outcome score in this order: Large CPA firms with audit engagement offices located in the US and Canada; large CPA firms with audit engagement offices located in countries with lower country level audit quality; small CPA firms with audit engagement offices located in the US and Canada; small CPA firms with audit engagement offices located in countries with lower country level audit quality. This is exactly what our results show with regard to the Other country companies. Conversely, there is no such monotonic increase in Outcome scores with regard to the Chinese companies. This suggests that auditor litigation with regard to the Chinese companies has unique characteristics, warranting multivariate (all of the study's multivariate analyses are in the Appendix) and other analyses, which we undertake as follows.

**Figure 2.** Auditor litigation outcomes
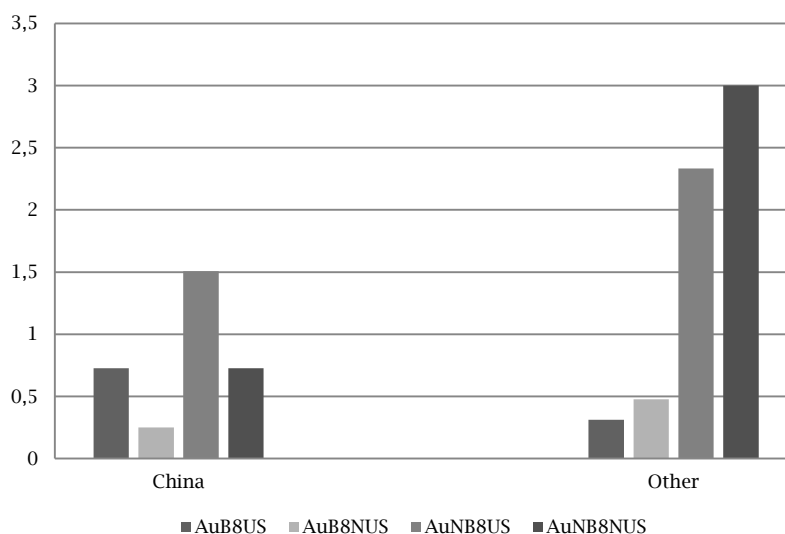


Table 6 (see Appendix) presents the largest ($4,500,000 and up) aggregate settlements in the Chinese companies' securities class actions. The filing date column shows the date of commencement of the lawsuit). The court column reports the most prominent court if the lawsuit proceeded in multiple courts. The last column shows the amount paid by all of the defendants, in the aggregate.

Sino-Forest had[11] its principal operations in the PRC. The lawsuit also proceeded in other Canadian courts and in the New York Southern District. Ernst & Young (Toronto) contributed $117,583,830 and BDO Limited (Hong Kong) $6,361,080 to the settlement.

SinoTech Energy had its principal operations in the PRC. Ernst & Young Hua Ming (Beijing) and Grant Thornton (Hong Kong) were both named defendants but did not contribute to the settlement.

LDK Solar had its principal operations in the PRC. KPMG (Hong Kong) was not named a defendant and did not contribute to the settlement.

Tommy Hilfiger had its operations in many countries, but its principal executive offices before the lawsuit filing were at 9/F, Novel Industrial Bldg, 850-870 Lai Chi Kok Road, Kowloon, Hong Kong (SAR). PricewaterhouseCoopers (New York) was not named a defendant and did not contribute to the settlement.

Silvercorp Metals had its principal operations in the PRC. Ernst & Young LLP Chartered Accountants (Vancouver, Canada) was not named a defendant and did not contribute to the settlement.

Giant Interactive had its principal operations in the PRC. Ernst & Young Hua Ming (Shanghai) was not named a defendant and did not contribute to the settlement.

China MediaExpress had its principal operations in the PRC. A.J. Robbins (US) and Deloitte & Touche (Hong Kong) were both named defendants but only Deloitte & Touche (Hong Kong) contributed ($12,000,000) to the settlement.

Zungui Haixi had its principal operations in the PRC. Ernst and Young LLP (Vancouver) contributed $2,000,000 to the settlement.

Puda Coal had its principal operations in the PRC. Moore Stephens (Hong Kong) contributed $125,000 to the settlement.

RINO International had its principal operations in the PRC. Frazer Frost LLP (Los Angeles) contributed $ 1,685,000 to the settlement.

Fuqi International had its principal operations in the PRC. Stonefield Josephson (Hong Kong) was not named a defendant and did not contribute to the settlement.

Montage Technology had its principal operations in the PRC. PricewaterhouseCoopers Zhong Tian (Shanghai) was not named a defendant and did not contribute to the settlement.

AgFeed Industries had its principal operations in the PRC. Goldman Parks Kurland Mohidin (Encino, CA) and McGladrey & Pullen (Des Moines) were both named defendants but neither contributed to the settlement.

CNinsure had its principal operations in the PRC. Deloitte Touche Tohmatsu (Hong Kong) was not a defendant and did not contribute to the settlement.

Duoyuan Printing had its principal operations in the PRC. Moore Stephens Wurth Frazer & Torbet (Brea, CA) was named a defendant but did not contribute to the settlement.

Duoyuan Global Water had its principal operations in the PRC. Grant Thornton LLP (Hong Kong) was named a defendant but did not contribute to the settlement.

NQ Mobile stated in its 20-F filed April 19, 2013, that a substantial portion of its assets and operations are located in China and that it derived a majority of its revenue from customers in China. It also stated it had its principal executive offices in Beijing and Dallas. PricewaterhouseCoopers Zhong Tian (Beijing) was named a defendant but did not contribute to the settlement.

JinkoSolar had its principal operations in the PRC. PricewaterhouseCoopers LLP (Shanghai) was not named a defendant and did not contribute to the settlement.

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[11] The companies in this section are all described in the past tense for ease of exposition. Some no longer exist.

Suntech Power had its principal operations in the PRC. Deloitte Touche Tohmatsu (Shanghai) was not named a defendant and did not contribute to the settlement.

New Oriental Education & Technology had its principal operations in the PRC. Deloitte Touche Tohmatsu (Beijing) was not named a defendant and did not contribute to the settlement.

JA Solar had its principal operations in the PRC. PricewaterhouseCoopers (Shanghai) was not named a defendant and did not contribute to the settlement.

Next, Table 7 (see Appendix) shows a detailed analysis of the payments made to settle the Chinese companies' securities class actions. This sample consists of 131 observations, reduced by 12 due to a lack of the necessary co-defendants (in addition to the auditor). Table 7 presents descriptive statistics on the aggregate settlements, which are the total amounts paid by all of the defendants to settle the lawsuit. The average aggregate settlement was $5,023,743.

Aggregate settlement varies by auditor type[12]. As shown in Table 7, the average aggregate settlement when the company was audited by a large CPA firm with the audit engagement team located on the mainland of China was $2,801,725. The amount was larger ($9,825,591) when the company was audited by a large CPA firm with the audit engagement team located in Hong Kong. The amount was largest ($17,088,282) when the company was audited by a large CPA firm with the audit engagement team located in the in the US or Canada.

No CPA firms with the audit engagement team located on the mainland of China were inspected by the PCAOB. No large CPA firms with the audit engagement team located in Hong Kong were inspected by the PCAOB. All the CPA firms with the audit engagement team located in the US or Canada were inspected by the PCAOB. Half (five) of the small CPA firms with the audit engagement team located in Hong Kong were inspected by the PCAOB.

The results also show that if an auditor settlement occurs, the average aggregate settlement more than triples, to $16,231,176. Bankruptcy is also associated with a large increase in the aggregate settlement amount; no definite inference can be drawn because there are only 6 lawsuits with a related bankruptcy[13]. A class period longer than the median is associated with almost a tripling of the aggregate settlement amount.

Reverse mergers are associated with a smaller than average aggregate settlement amount, partly because they are smaller companies than IPO companies or companies that went public long ago. However, Table 7 shows a strict monotonic decrease in the aggregate settlement as a function of the length of the window for a reverse merger being coded as present. Figure 3 depicts this monotonic trend visually. The evidence lends further support to

Chen et al. (2016) and the intuition that the negative impact of an RM gradually declines as the periodic financial reporting of the company becomes more relevant than how the company went public.

Table 7 also provides five litigation data items at the bottom. A lack of service of process on the auditor, as well as an auditor default judgment, seem to be rare events[14]. However, a lack of service of process on one or more members of management or the board of directors occurs in 67% of lawsuits against Chinese companies, which results in a puzzling increase in the average aggregate settlement amount by a million dollars, to $6,060,529. After all, if fewer defendants are served, they cannot be required to participate in the litigation and cannot be forced to provide evidence or make payments to the plaintiffs. However, this is a complex phenomenon. In some lawsuits, it matters a great deal if certain defendants are not served, but in others, it matters less. For example, in an IPO lawsuit, the plaintiffs may be able to get a large payment from the underwriter and thus the other defendants are less important. Also, sometimes a company has liability insurance that covers the company only, the management and the board of directors only, all the above, or none of the above, possibly motivating different kinds of defendant litigation behavior.

Also, we are not able to distinguish between failures to effect service of process that were routine versus those critical to the success of the plaintiffs. Sometimes a plaintiff will name some defendants in an initial complaint, not serve all of them, and then when an amended complaint is filed, not continue naming some of them as defendants because new information suggests a lack of provable liability on the part of some former defendants.

Anecdotal evidence shows plaintiffs in some cases unsuccessfully attempting service of process on individual defendants in mainland China for several years. On the other hand, authorities describe the service of process problem in mainland China as less severe than the anecdotal evidence. Lukken (2017) states that "[i]t may take a while – likely 9 months from submission to return of proof, if not more. The folks in Beijing get the job done; it just takes a while." Harris (2014) states that "[y]ou should figure on service taking three to six months." Lukken (2017) states that in Hong Kong it will take "likely three or four months from submission to return of proof [of service of process]."

When there was a default judgment taken against the company, or against a member of the management or board of directors, the aggregate settlement was about half the average. Attorneys experienced in lawsuits against Chinese companies believe it is a waste of time to obtain a default judgment from a US court (Harris 2009; Davis 2015). It will not be enforced in mainland China (Harris 2010). There are a few countries where a judgment of a US court may be enforced, but usually only litigated (not default) judgments. Also, there would need to be defendant assets located in that country. We are unaware of enforcement of any of the 15 default judgments against companies or 7 default judgments against individuals (see Table 7).

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[12] Tables 4, 7, 8 and (in the Appendix) 13 through 15 use five auditor types. They are AuB8ChinaM (large CPA firms based in mainland China), AuB8HKSAR (large CPA firms based in Hong Kong), AuB8USCan (large CPA firms based in the US or Canada), AuNB8HKSAR (small CPA firms based in Hong Kong), and AuNB8USCan (small CPA firms based in the US or Canada). There are no small CPA firms based in mainland China among the 131 sample observations. We group together the US and Canada CPA firms for three reasons. There is a scarcity of observations of large CPA firms based in the US or Canada, they have similar country level audit quality per Brown et al. (2014), and they have similar relevant legal environments (they are by far the two most active venues for private securities class actions in the world).
[13] Bankruptcy occurs less frequently (5%) here than in the total (n=2,254) data set (10%).

[14] A lack of service of process on the defendant company is even rarer. It did not occur even once in our data set of 131 observations.

Table 8 (see Appendix) presents descriptive statistics on the payments made specifically by the auditors to settle the lawsuits. The average auditor payment was $1,179,490. The median auditor payment was $0 because often the auditor paid nothing to settle the lawsuit. The details of the largest auditor payments are presented in the text accompanying Table 6 (see Appendix). Six payments by auditors were $2,000,000 or higher. Five auditor payments ranged from $1,250,000 to $1,950,000. Thirteen auditor payments ranged from $7,500 to $850,000. In the other 107 observations, the auditor payment was $0.

**Figure 3.** Auditor settlements and aggregate settlements as a function of the reverse merger window choice
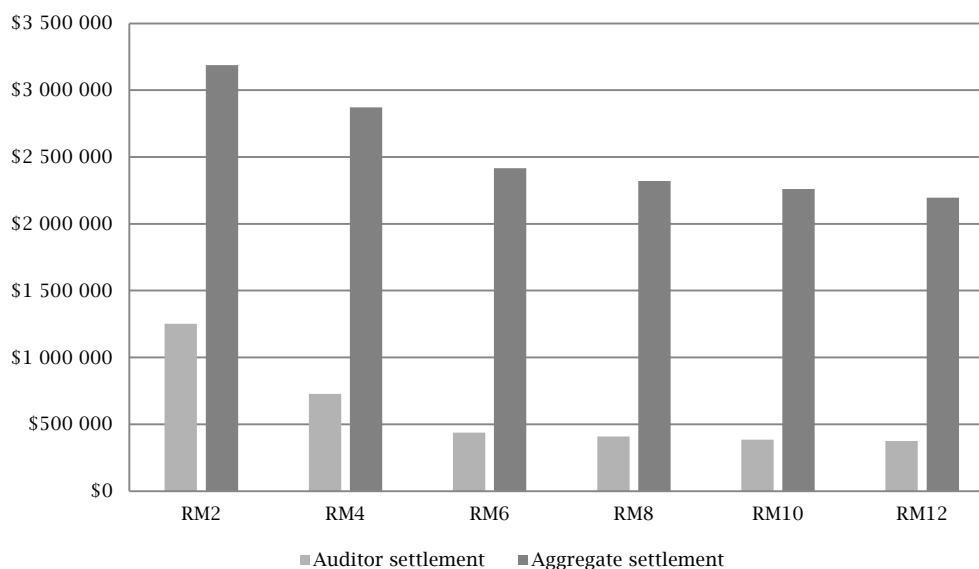


*Notes: RM2 means a reverse merger is coded as present only if litigation commencement date <= 2 years after reverse merger transaction date, etc.)*

When the company was audited by a CPA firm with the audit engagement team located on the mainland of China, the auditor never paid any money in any of the 29 observations to settle the securities class action. This is astounding, given that each of the other four auditor types made substantial payments (for example, the large Hong Kong auditors paid an average of $937,962 and the large US and Canadian auditors paid an average of $9,965,319) to settle securities class actions. Empirically, the mainland China auditors have been unaccountable to the users of audited financial statements. However, this is a complex phenomenon, as we will discuss later in the paper.

Bankruptcy seems to be associated with a very large increase in the auditor payment but no definite conclusions can be drawn because there are only 6 lawsuits with a related bankruptcy. A class period longer than the median is associated with a 74% increase in the auditor payment. Fraud is associated with almost a quadrupling of the average auditor payment. Company size is positively associated with the auditor payment. If the total assets are above the median, the auditor payment is on average five times larger than if total assets are below the median.

Restatements of annual financial statements occur less frequently (13%) in the Chinese company sample than in the overall sample (28%), consistent with the findings of Srinivasan et al. (2015). Their finding that weak rule of law country (for example, China) companies underreport restatements more than strong rule of law country companies helps to explain the unprecedented (in prior auditor litigation research) finding that the occurrence of a restatement is associated with a smaller than average auditor payment of $167,059, one-seventh the average amount of $1,179,490.

Reverse mergers are associated with a similar average auditor payment compared to the overall average payment of $1,129,672 when RM2 is the specification for coding a reverse merger as being present. Thereafter, similar to Table 7, there is a strict monotonic decrease in the auditor payment to settle the litigation as the length of a reverse merger being present increases. Figure 3 provides a visual presentation of such a trend as shown in Table 8. This evidence (like that of Table 7) again supports the intuition of a gradual eclipse in the importance of how the company went public, with regard to the financial reporting of the company, as reported by Chen et al. (2016).

The bottom of Table 8 provides litigation data. We omit discussion of the events that occur in only single digit frequency. Company default judgments appear to be associated with a slight increase in the average auditor payment, compared to the overall average auditor payment. A lack of service of process on one or more members of management or the board of directors is associated with a 44% increase in the average auditor payment to $1,702,707. If fewer defendants are served, they cannot be required to make payments to the plaintiffs. The remaining defendants (often solely the auditor) that have available assets become even more a focus for the plaintiffs in the litigation.

We include control variables in our multivariate models to rigorously test our hypotheses.

Table 9 (see Appendix) presents the correlation matrix for the overall sample of 2,254 litigation observations. There is a high positive correlation (.58) between China and reverse mergers. RM6 was used to construct Table 9, but the results are similar if one of the other RM's is used. There also is a high negative correlation (-.5) between LnTA and AuNB8US, and a high positive correlation (.47) between Other countries and AuB8NUS. Yet, the condition indexes are below 4.4, suggesting little cause for concern about multicollinearity.

Table 10 (see Appendix) displays the polytomous regression results for the full sample (n=2,254). The variable of primary interest, China, is positively associated with Outcome (the auditor being named a defendant and experiencing an adverse outcome in the lawsuit). Consistent with prior research, Bankrupt, Class, Fraud, Restate, and the two small CPA firm variables (AuNB8US and AuNB8NUS) are positively associated with Outcome. The Other countries variable also has a positive association with Outcome. This is unsurprising because the 109 Other countries have an aggregate audit quality score that is lower than that for any other country except for China (see Table 5). Reverse mergers have no association with Outcome. RM6 was used to conduct the analysis shown in Table 10, but the results are similar if one of the other RM's is used. In sum, the regression results on the full data set are consistent with our expectations. The overall litigation pattern has not changed very much, despite 19% of the lawsuits being against companies from outside the US.

Table 11 (see Appendix) presents the results of the polytomous regression on Outcome for the Other country companies (n=109). The same variables were used (except for the country variables) as those used in the analysis of the full sample in Table 10. The results are mostly consistent with prior research. Bankrupt, Class, and Fraud are all positively associated with Outcome. However, Restate has a negative association with Outcome. This is unprecedented in prior auditor litigation research but somewhat predicted by Srinivasan et al. (2015). They found that restatements are underreported by companies from weak rule of law countries[15], compared to companies from strong rule of law countries. Thus, when analyzing a sample of companies from weak rule of law countries, restatements are not necessarily a measure of low financial reporting quality[16].

Table 12 (see Appendix) presents the results of the polytomous regression on Outcome for the Chinese companies (n=143). The same variables were used as those used in the analysis for Table 11. Unlike the results for the Other companies, the results for Chinese companies are mostly inconsistent with prior research. Bankrupt, Class, and Restate are not associated with Outcome. The lack of significance on the bankruptcy variable is unsurprising as we discussed earlier. Consistent with prior research, Fraud has a positive association

with Outcome and the natural log of total assets has a negative association with Outcome.

Consistent with prior research, small CPA firms with audit engagement teams located in the US or Canada (AuNB8USCan) are positively associated with Outcome. However, small CPA firms with audit engagement teams located in China (AuNB8China) are not associated with Outcome. There is no clear explanation for the disparate fate of small CPA firm auditors depending on where the engagement team is located. On the one hand, the Chinese small CPA firm auditors have an advantage compared to US small CPA firm auditors with regard to service of process, obtaining of evidence, and enforcement of judgments. On the other hand, the violation of auditing standards requiring the careful monitoring of delegated audit procedures, by some of the US small CPA firm auditors, could explain these results.

We performed the regression analysis six times, each with a different specification for when to code a reverse merger being present. RM4 and RM6 (the specification shown in Table 12) are positively associated with Outcome. There is no association when using reverse merger specifications RM2, RM8, RM10 or RM12. The results of all other variables are not influenced by the choice of which reverse merger specification is used. Logically, the negative impact of an RM gradually dissipates as the periodic financial reporting of the company supersedes the relevance with regard to how the company went public. Our results using RM4, RM6, RM8, RM10 and RM12 support Chen et al. (2016) except for the lack of significance of the RM2 specification.

Table 13 (see Appendix) shows the correlations among the independent variables used in the regressions in Tables 14 and 15 (see Appendix). Other than the auditor types with each other, there are five high correlations with a significance of five percent or better. Small CPA firms that have their audit engagement teams in the US or Canada (AuNB8USCan) are positively correlated with reverse mergers at .44 and negatively correlated with natural log of total assets (LnTA) at -.39. An auditor settlement (AudSettle) is positively correlated with a company default judgment (DefaultCom) at .39 and with reverse mergers at .32. A failure of service of process on managers or directors (NoServeMgt) is positively correlated with reverse mergers at .35. We used RM6 to construct Table 13 but the results are similar if one of the other reverse merger window specifications is used. We are not overly concerned with multicollinearity in the regressions in Tables 14 and 15 since the variance inflation factors and the condition indexes are all under 5.

The multiple linear regressions on the aggregate payments to settle the securities class action lawsuits are shown in Tables 14A (AuB8ChinaM is the reference for auditor type and thus is not displayed) and 14B (AuB8USCan is the reference for auditor type and thus is not shown). Six columns of results are displayed showing slightly different results depending on the choice of reverse merger window specification. We regard the clearly significant results as those at five percent or better (two or three asterisks) with a majority of the window specifications for a reverse merger. In Table 14A, the presence of an auditor settlement (AudSettle) and the length of the class period (Class) are positively associated with the amount of the aggregate payment to settle the securities class

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[15] Countries (see Table 5a) that Srinivasan et al. (2015) classify as having weak rule of law, include Argentina, Brazil, Greece, India, Mexico, Peru, South Africa, South Korea, Spain, Taiwan and Thailand. Srinivasan et al. (2015) also classify China as a weak rule of law country.
[16] We tabulated the results using RM6 in Table 11, but the results are similar if one of the other reverse merger windows is used.

action lawsuit. Reverse mergers are negatively associated with the amount of the aggregate payment to settle the securities class action lawsuit. In Table 14B, the results are the same as those in Table 14A[17].

Multiple logistic regressions with a binary dependent variable being 1 if an auditor settlement payment occurs and 0 otherwise, are presented in Tables 15A (AuB8ChinaM is the reference for auditor type and thus is not displayed) and 15B (AuB8USCan is the reference for auditor type and thus is not shown). In Table 15A, a default judgment taken against the company is positively associated with the occurrence of an auditor settlement payment. In Table 15B, the results are the same as those in Table 15A.

The multiple linear regressions on the auditor payments contributing to the settlement of the securities class action lawsuits are presented in Tables 15C (AuB8ChinaM is the reference for auditor type and thus is not displayed) and 15D (AuB8USCan is the reference for auditor type and thus is not shown). In Table 15C, three factors are positively associated with the amount of the auditor payment: the use of an auditor that is a large CPA firm with the audit engagement team located in the US or Canada, the length of the class period, and the presence of fraud. In Table 15D, two factors are negatively associated with the amount of the auditor payment: the use of an auditor that is a large CPA firm with the audit engagement team located on the mainland of China, and the use of an auditor that is a small CPA firm with the audit engagement team located in the US or Canada. The presence of fraud and the length of the class period are positively associated with the amount of the auditor payment.

## 6. CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Our analysis of 2,254 lawsuits against companies from around the world shows that companies from China are positively associated with the auditor being named a defendant and experiencing an adverse outcome in the litigation. We did not find this for any other individual country. However, we did find that companies from a group of 109 "other" countries, which in the aggregate had almost as low a Brown et al. (2014) country level audit quality score as China, also are positively associated with the auditor being named a defendant and experiencing an adverse outcome in the litigation. This motivated the further analysis of this group of companies, as well as the Chinese companies.

We found that the factors associated with the auditor being named a defendant and experiencing an adverse litigation outcome are different for the companies from the "other" countries compared to the overall sample of 2,254 observations. A restatement was found to be negatively associated with the auditor being named a defendant and experiencing an adverse litigation outcome. This was surprising because it is unprecedented in prior auditor litigation research. Srinivasan (2015) suggests we would find this when analyzing a group of weak rule of law countries but almost three-quarters of our "other" country observations are

from strong rule of law countries. Our results suggest that low country level audit quality, compared to weak rule of law, may be more directly related to underreporting of restatements, but more research on the relationship between auditor liability and restatements is needed. Until now, it has been regarded as settled that there is always a positive association between auditor liability and restatements, but prior research has not examined, as we have, companies from low country level audit quality countries. Further research on the relationship between restatements and auditor litigation, with regard to companies from low country level audit quality, is needed.

We found that the factors associated with the auditor being named a defendant and experiencing an adverse litigation outcome are also different for the Chinese companies, compared to the overall sample of 2,254 observations. A restatement was not positively associated with the auditor being named a defendant and experiencing an adverse litigation outcome. Bankruptcy was not a significant factor, which is unsurprising given that the nature of transnational litigation against companies and individuals from China makes it far easier to make assets unavailable to plaintiffs than for companies and individuals from other countries. Reverse mergers are positively associated with the auditor being named a defendant.

Transnational litigation, when it is against companies and individuals from China, is unique, complex, and puzzling. Why have the mainland China auditors (they are all large CPA firms) never paid any money to settle a securities class action filed in the US or Canada? All the other auditor types (large CPA firms in Hong Kong, large CPA firms in the US or Canada, small CPA firms in Hong Kong, small CPA firms in the US or Canada – see Table 8) have paid large sums to settle such lawsuits. Possible explanations for this phenomenon are as follows:

– From a negative perspective, the declarations under the Hague Service Convention and the Hague Evidence Convention (the declarations are very different for Hong Kong) by mainland China are so biased in favor of defendants and against plaintiffs with regard to service of process and, especially, compelling the taking of pretrial evidence from defendants, that defendant auditors are almost immune from accountability to plaintiff investors. In addition, the lack of PCAOB inspections (since these may lead to SEC investigations and the filing of securities class actions and make available evidence for both) of large CPA firms both in mainland China and in Hong Kong indirectly hinders the plaintiffs. An additional indirect obstacle is that CPA firms in mainland China and CPA firms in Hong Kong that audit operations in mainland China refuse to directly provide evidence to the SEC, obstructing SEC investigations. Finally, mainland China courts do not enforce US court judgments, whether default or litigated.

– From a positive perspective, mainland China CPA firms are by far the most selective about which companies they take on as audit clients. Only 3% of their audit clients let a default judgment be taken against them. This compares to 30% of the small Hong Kong CPA firms, 17% of the large US and Canadian CPA firms, 12.5% of the small US and Canadian CPA firms, and 8% of the large Hong Kong CPA firms. Only 10% of their audit clients became

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[17] We also performed multiple logistic regression, with a binary dependent variable being 1 if an aggregate settlement occurs and 0 otherwise. The same independent variables were used. No independent variable was significant at p<.05.

public via a reverse merger. This compares to 86% of the small US and Canadian CPA firms, 70% of the small Hong Kong CPA firms, 42% of the large Hong Kong CPA firms, and 17% of the large US CPA firms.

Further research is needed to investigate why the large CPA firms in mainland China overwhelmingly dominate the market for high-quality audit clients. That provides them with an advantage compared to the other CPA firms because they have lower costs related to private securities class actions, PCAOB inspections, PCAOB enforcement actions, SEC enforcement actions, and DOJ criminal prosecutions. This advantage, along with other factors, could make it easy for them to underbid other CPA firms.

Future research is also needed to develop an index that incorporates the determinants of default judgments (a China D-score), similar to the Altman (1986) Z-score for bankruptcy, for Chinese companies. The determinants of default judgments are far more important with regard to Chinese companies than the determinants of bankruptcy. Such research, combined with extant research on the determinants of Chinese companies' becoming publicly traded via an IPO versus via a reverse merger, could provide insights into why the large CPA firms in mainland China are better at audit client selection, as well as why they have been almost immune from litigation risk related to private securities class actions.

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## APPENDIX

**Table 1.** Frequencies of lawsuits by country

| Year | Bermuda | Canada | China | France | Israel | UK | Other | US |
|------|---------|--------|-------|--------|--------|-----|-------|-------|
| 2001 | 2 | 3 | 2 | 0 | 3 | 1 | 5 | 156 |
| 2002 | 4 | 5 | 0 | 2 | 2 | 2 | 5 | 195 |
| 2003 | 2 | 2 | 1 | 2 | 1 | 2 | 11 | 158 |
| 2004 | 2 | 7 | 3 | 1 | 3 | 2 | 13 | 172 |
| 2005 | 3 | 9 | 3 | 1 | 1 | 3 | 5 | 152 |
| 2006 | 4 | 3 | 2 | 0 | 0 | 1 | 7 | 104 |
| 2007 | 2 | 3 | 10 | 3 | 2 | 2 | 7 | 137 |
| 2008 | 0 | 10 | 6 | 3 | 2 | 3 | 14 | 134 |
| 2009 | 0 | 4 | 1 | 1 | 1 | 2 | 6 | 105 |
| 2010 | 1 | 3 | 15 | 0 | 0 | 1 | 6 | 89 |
| 2011 | 1 | 8 | 56 | 3 | 0 | 1 | 12 | 88 |
| 2012 | 1 | 6 | 19 | 0 | 0 | 0 | 3 | 103 |
| 2013 | 0 | 10 | 11 | 2 | 2 | 0 | 8 | 119 |
| 2014 | 2 | 7 | 14 | 3 | 2 | 2 | 7 | 124 |
| Total | 24 | 80 | 143 | 21 | 19 | 22 | 109 | 1,836 |

**Table 2.** Variable definitions (Part I)

| | |
|---|---|
| ***Dependent Variable*** | |
| AggSettlement | = A continuous variable used in multiple linear regression. It is the total dollar amount paid by all the defendants to the plaintiffs in the lawsuit |
| AudSettlement | = A continuous variable used in multiple linear regression. It is the dollar amount paid by the auditor to the plaintiffs in the lawsuit |
| Outcome | = An indicator variable used in the polytomous regression. It is set to 1 if the auditor was named a defendant; 2 if the auditor was forced to pay to settle private litigation; 3 if the auditor was a defendant in a government civil litigation or administrative proceeding; 4 if the auditor was criminally prosecuted; 0 otherwise (i.e. the auditor was not even named a defendant in private litigation) |
| ***Independent Variables (in Alphabetical Order)*** | |
| AuB8ChinaM | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team on the mainland of China; 0 otherwise (only used in Tables 9 et seq.) |
| AuB8HKSAR | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team in the Special Administrative Region of China; 0 otherwise (only used in Tables 9 et seq.) |
| AuB8NUS | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team outside the US; 0 otherwise |
| AuB8US | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team in the US; 0 otherwise |
| AuB8USCan | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team in the US or Canada; 0 otherwise (only used in Tables 8 et seq.) |
| AudSettle | = An indicator variable that is set to 1 if the auditor paid to settle the lawsuit (also used as a dependent variable in Tables 13A and 13B); 0 otherwise |
| AuNB8HKSAR | = An indicator variable that is set to 1 if the auditor is a non-Big 8 CPA firm with the office of the audit engagement team in the Special Administrative Region of China; 0 otherwise (only used in Tables 9 et seq.) |
| AuNB8NUS | = An indicator variable that is set to 1 if the auditor is a non-Big 8 CPA firm with the office of the audit engagement team outside the US; 0 otherwise |
| AuNB8US | = An indicator variable that is set to 1 if the auditor is a non-Big 8 CPA firm with the office of the audit engagement team in the US; 0 otherwise |
| AuNB8USCan | = An indicator variable that is set to 1 if the auditor is a Big 8 CPA firm with the office of the audit engagement team in the US or Canada; 0 otherwise (only used in Tables 8 et seq.) |
| Bankrupt | = An indicator variable that is set to 1 if the company filed for bankruptcy within 1 year of the filing of the litigation; 0 otherwise |
| Bermuda | = An indicator variable that is set to 1 if the company's principal executive offices are in Bermuda; 0 otherwise |
| Canada | = An indicator variable that is set to 1 if the company's principal executive offices are in Canada; 0 otherwise |
| China | = An indicator variable that is set to 1 if the company's principal executive offices are in China; 0 otherwise |
| Class | = The class period, in months, of the plaintiff investors |
| DefaultCom | = An indicator variable that is set to 1 if the company let a default judgment be taken against it in the lawsuit; 0 otherwise |
| France | = An indicator variable that is set to 1 if the company's principal executive offices are in France; 0 otherwise |
| Fraud | = An indicator variable that is set to 1 if the company or its senior executives are alleged to have committed financial reporting fraud per a government enforcement action or lawsuit; 0 otherwise |
| Israel | = An indicator variable that is set to 1 if the company's principal executive offices are in Israel; 0 otherwise |
| Inc.BVI | = An indicator variable that is set to 1 if a Chinese company is incorporated in the British Virgin Islands; 0 otherwise |
| Inc.Canada | = An indicator variable that is set to 1 if a Chinese company is incorporated in Canada; 0 otherwise |
| Inc.Cayman | = An indicator variable that is set to 1 if a Chinese company is incorporated in the Cayman Islands; 0 otherwise |
| Inc.ChinaM | = An indicator variable that is set to 1 if a Chinese company is incorporated on the Mainland of the PRC; 0 otherwise |
| Inc.HKSAR | = An indicator variable that is set to 1 if a Chinese company is incorporated in Hong Kong; 0 otherwise |
| Inc.US | = An indicator variable that is set to 1 if a Chinese company is incorporated in the United States; 0 otherwise |
| LnTA | = The natural log of the company's total assets in thousands of US dollars |

**Table 2.** Variable definitions (Part II)

| | |
|---|---|
| *Independent Variables (in Alphabetical Order)* | |
| NoServeMgt | = An indicator variable that is set to 1 if the plaintiffs were unable in the lawsuit to serve 1 or more members of the company's management or board of directors |
| Other | = An indicator variable that is set to 1 if the company's principal executive offices are in some country other than Bermuda, Canada, China, France, Israel, the UK or the US; 0 otherwise |
| Restate | = An indicator variable that is set to 1 if the company restated its annual financial statements; 0 otherwise |
| RM | = An indicator variable, set to 1 if the company became public via a reverse merger transaction; 0 otherwise |
| RM2 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 2 years before the filing of the litigation; 0 otherwise |
| RM4 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 4 years before the filing of the litigation; 0 otherwise |
| RM6 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 6 years before the filing of the litigation; 0 otherwise |
| RM8 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 8 years before the filing of the litigation; 0 otherwise |
| RM10 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 10 years before the filing of the litigation; 0 otherwise |
| RM12 | = An indicator variable, set to 1 if the company became public via a reverse merger transaction a maximum of 10 years before the filing of the litigation; 0 otherwise |
| UK | = An indicator variable that is set to 1 if the company's principal executive offices are in the United Kingdom; 0 otherwise |
| US | = An indicator variable that is set to 1 if the company's principal executive offices are in the United States; 0 otherwise |

**Table 3.** Descriptive statistics for the full sample (n=2,254)

| | | *Total Sample (n=2,254)* |
|---|---|---|
| AuB8NUS | Frequency | 278 |
| | Percent | 12% |
| AuB8US | Frequency | 1616 |
| | Percent | 72% |
| AuNB8NUS*[(+)] | Frequency | 27 |
| | Percent | 1% |
| AuNB8US*[(+)] | Frequency | 333 |
| | Percent | 15% |
| Bankrupt*[(+)] | Frequency | 234 |
| | Percent | 10% |
| Bermuda | Frequency | 24 |
| | Percent | 1% |
| Canada | Frequency | 80 |
| | Percent | 4% |
| China*[(+)] | Frequency | 143 |
| | Percent | 6% |
| Class*[(+)] | Mean (months) | 48 |
| | Standard deviation | 41 |
| | Median | 36 |
| France | Frequency | 21 |
| | Percent | 1% |
| Fraud*[(+)] | Frequency | 432 |
| | Percent | 19% |
| Israel | Frequency | 19 |
| | Percent | 1% |
| LnTA*[(-)] | Mean (Ln of $thousands) | 13.4 |
| | Standard deviation | 2.9 |
| | Median | 13.2 |
| Other*[(+)] | Frequency | 109 |
| | Percent | 5% |
| Restate*[(+)] | Frequency | 637 |
| | Percent | 28% |
| RM*[(+)] | Frequency | 126 |
| | Percent | 6% |
| UK | Frequency | 22 |
| | Percent | 1% |
| US | Frequency | 1,836 |
| | Percent | 81% |

Notes: *[(+)] denotes the association with OUTCOME is positive and significant at the 0.01 level.
*[(-)] denotes the association with OUTCOME is negative and significant at the 0.01 level.

**Table 4.** Descriptive statistics for the China sample (n=143)

| | | *Total Sample (n=2,254)* |
|---|---|---|
| AuB8ChinaM**(-) | Frequency | 29 |
| | Percent | 20% |
| AuB8HKSAR*(-) | Frequency | 24 |
| | Percent | 17% |
| AuB8USCan | Frequency | 12 |
| | Percent | 8% |
| AuNB8HKSAR | Frequency | 10 |
| | Percent | 7% |
| AuNB8USCan**(+) | Frequency | 68 |
| | Percent | 48% |
| Bankrupt | Frequency | 7 |
| | Percent | 5% |
| Class*(+) | Mean (months) | 46 |
| | Standard deviation | 37 |
| | Median | 40 |
| Fraud**(+) | Frequency | 41 |
| | Percent | 29% |
| Inc.BVI | Frequency | 15 |
| | Percent | 10% |
| Inc.Canada | Frequency | 9 |
| | Percent | 6% |
| Inc.Cayman**(-) | Frequency | 36 |
| | Percent | 25% |
| Inc.ChinaM | Frequency | 2 |
| | Percent | 1% |
| Inc.HKSAR | Frequency | 1 |
| | Percent | 1% |
| Inc.US**(+) | Frequency | 80 |
| | Percent | 56% |
| LnTA**(-) | Mean (Ln of $thousands) | 11.9 |
| | Standard deviation | 1.6 |
| | Median | 12 |
| Restate*(+) | Frequency | 21 |
| | Percent | 15% |
| RM**(+) | Frequency | 80 |
| | Percent | 56% |

*Notes: **(+) denotes the association with OUTCOME is positive and significant at the 0.01 level.*
*(+) denotes the association with OUTCOME is positive and significant at the 0.05 level*
***(-) denotes the association with OUTCOME is negative and significant at the 0.01 level.*
*(-) denotes the association with OUTCOME is negative and significant at the 0.05 level.*

**Table 5.** Country level audit quality (Brown et al., 2014)

| *Country* | *Country Level Audit Quality* | *Number of Observations* |
|---|---|---|
| Canada | 32 | 80 |
| UK | 32 | 22 |
| US | 32 | 1,836 |
| France | 29 | 21 |
| Israel | 24 | 19 |
| Other | 23.25* | 109 |
| China | 21 | 143 |

*Note: The highest possible audit quality receives a score of 32.*
*Bermuda was not included in the Brown et al. (2014) study.*
*Weighted average of Other countries per the Brown et al. (2014) study. See Table 5a.*

**Table 5a.** Other countries: country level audit quality (Brown et al. 2014) (Part I)

| *Country* | *N* | *Brown audit quality score* |
|---|---|---|
| Argentina | 1 | 9 |
| Australia | 12 | 30 |
| Austria | 1 | 19 |
| Belgium | 1 | 22 |
| Brazil | 3 | 15 |
| Cayman Islands | 1 | |
| Channel Islands | 1 | |
| Curacao | 1 | |
| Denmark | 2 | 27 |
| Finland | 3 | 20 |
| Germany | 9 | 23 |
| Greece | 3 | 17 |
| Iceland | 1 | |
| India | 2 | 15 |
| Ireland | 9 | 29 |
| Italy | 2 | 27 |
| Japan | 4 | 26 |
| Luxembourg | 3 | |

**Table 5a.** Other countries: country level audit quality (Brown et al. 2014) (Part II)

| Country | N | Brown audit quality score |
|---|---|---|
| Malaysia | 1 | 21 |
| Mexico | 1 | 12 |
| Netherlands | 12 | 24 |
| Netherlands and UK | 2 | 24 |
| Norway | 2 | 25 |
| Peru | 2 | 11 |
| Russia | 4 | 22 |
| Singapore | 3 | 20 |
| South Africa | 4 | 19 |
| South Korea | 3 | 18 |
| Spain | 1 | 26 |
| Sweden | 2 | 25 |
| Switzerland | 10 | 27 |
| Taiwan | 2 | 10 |
| Thailand | 1 | 11 |
| Total | 109 | |

**Table 6.** Largest aggregate settlements in the Chinese companies' securities class actions

| Company | Filing date | Court | Amount |
|---|---|---|---|
| Sino-Forest Corporation | 6/15/11 | ON Superior | $154,564,182 |
| SinoTech Energy Limited | 8/19/11 | NYSD | $20,000,000 |
| LDK Solar Co., Ltd. | 10/9/07 | CAND | $16,000,000 |
| Tommy Hilfiger Corp. | 9/28/04 | NYSD | $16,000,000 |
| Silvercorp Metals, Inc. | 12/28/12 | NYSD | $14,000,000 |
| Giant Interactive Group, Inc. | 11/26/07 | NYSD | $13,000,000 |
| China MediaExpress Holdings, Inc. | 2/4/11 | NYSD | $12,000,000 |
| Zungui Haixi Corporation | 10/3/11 | ON Superior | $10,750,000 |
| Puda Coal, Inc. | 4/15/11 | NYSD | $8,825,000 |
| RINO International Corporation | 11/12/10 | CACD | $8,685,000 |
| Fuqi International, Inc. | 3/19/10 | NYSD | $8,600,000 |
| Montage Technology Group Limited | 2/7/14 | CAND | $7,250,000 |
| AgFeed Industries, Inc. | 10/18/11 | TNMD | $7,000,000 |
| CNinsure Inc. | 10/17/11 | NYSD | $6,625,000 |
| Duoyuan Printing, Inc. | 9/20/10 | NYSD | $6,193,750 |
| Duoyuan Global Water, Inc. | 9/20/10 | NYSD | $5,150,000 |
| NQ Mobile Inc. | 10/28/13 | NYSD | $5,100,000 |
| JinkoSolar Holding Co. Ltd. | 10/11/11 | NYSD | $5,050,000 |
| Suntech Power Holdings Co., Ltd. | 8/2/12 | CAND | $5,000,000 |
| New Oriental Education & Technology Group | 7/23/12 | NYSD | $4,750,000 |
| JA Solar Holdings Co. Ltd. | 12/3/08 | NYSD | $4,500,000 |

**Table 7.** Aggregate payments in 131 Chinese companies' securities class actions (Part I)

| | Average | | Median | |
|---|---|---|---|---|
| Overall aggregate settlement | $5,023,743 | | $1,550,000 | |
| inspected (n=73) | $4,533,509 | | $1,500,000 | |
| uninspected (n=58) | $5,640,762 | | $1,650,000 | |
| **Characteristic** | **Average** | **Median** | **Frequency** | **% or mean** |
| | *Auditor characteristics* | | | |
| AuB8ChinaM | $2,801,725 | $1,550,000 | 29 | 22% |
| AuB8HKSAR | $9,825,591 | $2,062,500 | 24 | 18% |
| AuB8USCan | $17,663,682 | $3,125,000 | 12 | 9% |
| AuNB8HKSAR | $2,612,500 | $1,300,000 | 10 | 8% |
| – inspected (n=5) | $3,205,000 | $3,000,000 | | |
| – uninspected (n=5) | $2,020,000 | $600,000 | | |
| AuNB8USCan (inspected) | $1,838,517 | $1,345,000 | 56 | 43% |
| | *General litigation research characteristics* | | | |
| Auditor settlement | $16,231,176 | $3,100,000 | 21 | 16% |
| Bankruptcy | $52,982,228 | $3,575,000 | 6 | 5% |
| Class period in months | | | 49 (mean) | |
| – If Class >= median | $7,188,017 | | 42 (median) | |
| – If Class period < median | $2,758,019 | | | |
| Fraud | $8,425,082 | $2,300,000 | 29 | 22% |
| Restatement (annual) | $1,750,883 | $1,700,000 | 17 | 13% |
| Total Assets in $millions | | | 1125 (mean) | |
| – If Total Assets >= to median | $7,242,097 | | | 178 (median) |
| – If Total Assets < median | $2,771,261 | | | |

**Table 7.** Aggregate payments in 131 Chinese companies' securities class actions (Part II)

| Characteristic | Average | Median | Frequency | % or mean |
|---|---|---|---|---|
| *Reverse merger: 2, 4, 6, 8, 10 and 12 year windows (from date of RM to date of litigation)* | | | | |
| RM2 | $3,187,350 | $789,167 | 12 | 9% |
| RM4 | $2,870,514 | $2,000,000 | 33 | 25% |
| RM6 | $2,440,699 | $1,850,000 | 60 | 46% |
| RM8 | $2,344,015 | $1,600,000 | 64 | 49% |
| RM10 | $2,281,352 | $1,557,500 | 68 | 52% |
| RM12 | $2,216,171 | $1,500,000 | 70 | 53% |
| *Service of process failures and default judgments* | | | | |
| Auditor not served | $9,033,333 | $5,100,000 | 3 | 2% |
| Mgt or BOD not served | $6,060,529 | $1,725,000 | 88 | 67% |
| Auditor default judgment | $2,000,000 | $2,000,000 | 1 | 1% |
| Company default judgment | $3,317,325 | $1,340,000 | 15 | 11% |
| Mgt or BOD default judgment | $2,283,125 | $1,820,000 | 8 | 6% |
| *Place of incorporation* | | | | |
| Inc.BVI | $2,707,143 | $2,037,143 | 14 | 11% |
| Inc.Canada | $37,308,707 | $1,900,000 | 9 | 7% |
| Inc.Cayman | $3,754,286 | $2,000,000 | 35 | 27% |
| Inc.ChinaM | $0 | $0 | 2 | 1% |
| Inc.HKSAR | $0 | $0 | 1 | 1% |
| Inc.US | $2,186,171 | $1,500,000 | 70 | 53% |

**Table 8.** Auditor payments in 131 Chinese companies' securities class actions (Part I)

| | Average | | Median | |
|---|---|---|---|---|
| Overall auditor payment | $1,179,490 | | $0 | |
| inspected (n=73) | $1,804,138 | | $0 | |
| uninspected (n=58) | $393,294 | | $0 | |
| Characteristic | Average | Median | Frequency | % or mean |
| *Auditor characteristics* | | | | |
| AuB8ChinaM | $0 | $0 | 29 | 22% |
| AuB8HKSAR | $937,962 | $0 | 24 | 18% |
| AuB8USCan | $9,965,319 | $0 | 12 | 9% |
| AuNB8HKSAR | $237,500 | $0 | 10 | 8% |
| – inspected (n=5) | $415,000 | $0 | | |
| – uninspected (n=5) | $60,000 | $0 | | |
| AuNB8USCan (inspected) | $179,344 | $0 | 56 | 43% |
| *General litigation research characteristics* | | | | |
| Bankruptcy | $20,974,152 | $950,000 | 6 | 5% |
| Class period in months | | | | 49 (mean) |
| – If Class >= median | $2,057,237 | | | 42 (median) |
| – If Class period < median | $260,598 | | | |
| Fraud | $4,632,946 | $0 | 29 | 22% |
| Restatement (annual) | $167,059 | $0 | 17 | 13% |
| Total Assets in $millions | | | 1125 (mean) | |
| – If Total Assets >= to median | $1,981,363 | | 178 (median) | |
| – If Total Assets < median | $365,281 | | | |
| *Reverse merger: 2, 4, 6, 8, 10 and 12 year windows (from date of RM to date of litigation)* | | | | |
| RM2 | $1,252,356 | $262,917 | 12 | 9% |
| RM4 | $728,129 | $0 | 33 | 25% |
| RM6 | $439,888 | $0 | 60 | 46% |
| RM8 | $412,395 | $0 | 64 | 49% |
| RM10 | $388,136 | $0 | 68 | 52% |
| RM12 | $377,047 | $0 | 70 | 53% |
| *Service of process failures and default judgments* | | | | |
| Auditor not served | $0 | $0 | 3 | 2% |
| Mgt or BOD not served | $1,702,707 | $0 | 88 | 67% |
| Auditor default judgment | $0 | $0 | 1 | 1% |
| Company default judgment | $1,299,329 | $40,000 | 15 | 11% |
| Mgt or BOD default judgment | $20,625 | $0 | 7 | 5% |
| *Place of incorporation* | | | | |
| Inc.BVI | $155,357 | $0 | 14 | 11% |
| Inc.Canada | $13,993,879 | $0 | 9 | 7% |
| Inc.Cayman | $0 | $0 | 35 | 27% |
| Inc.ChinaM | $0 | $0 | 2 | 1% |
| Inc.HKSAR | $0 | $0 | 1 | 1% |
| Inc.US | $377,047 | $0 | 70 | 53% |

**Table 9.** Correlation matrix of independent variables used in overall sample (n= 2,254) (Part I)

|  | *AuB8NUS* | *AuNB8NUS* | *AuNB8US* | *Bankrupt* | *Bermuda* | *Canada* | *China* | *Class* |
|---|---|---|---|---|---|---|---|---|
| AuB8NUS | 1.000 |  |  |  |  |  |  |  |
| AuNB8NUS | -0.041 | 1.000 |  |  |  |  |  |  |
| AuNB8US | *-0.156 | -0.046 | 1.000 |  |  |  |  |  |
| Bankrupt | -0.048 | -0.011 | *0.055 | 1.000 |  |  |  |  |
| Bermuda | *0.066 | -0.011 | -0.019 | 0.021 | 1.000 |  |  |  |
| Canada | *0.409 | *0.111 | -0.033 | -0.002 | -0.020 | 1.000 |  |  |
| China | *0.218 | *0.273 | *0.210 | -0.053 | -0.027 | -0.050 | 1.000 |  |
| Class | *0.062 | 0.013 | 0.012 | *0.055 | 0.027 | *0.066 | 0.007 | 1.000 |
| France | *0.231 | -0.011 | -0.027 | -0.033 | -0.010 | -0.019 | -0.025 | 0.038 |
| Fraud | *-0.063 | 0.050 | *0.271 | *0.111 | -0.007 | -0.020 | *0.068 | *0.236 |
| Israel | *0.216 | 0.035 | -0.038 | -0.016 | -0.010 | -0.018 | -0.024 | -0.016 |
| LnTA | *0.162 | *-0.071 | *-0.495 | -0.014 | *0.070 | -0.034 | *-0.134 | *0.079 |
| Other | *0.469 | 0.013 | *-0.076 | -0.029 | -0.023 | -0.043 | *-0.059 | 0.041 |
| Restate | *-0.098 | -0.024 | -0.009 | *-0.068 | 0.021 | -0.014 | *-0.079 | *0.288 |
| RM | -0.003 | *0.204 | *0.361 | -0.013 | -0.025 | -0.015 | *0.578 | 0.004 |
| UK | *0.210 | -0.011 | -0.029 | -0.019 | -0.010 | -0.019 | -0.026 | -0.001 |

**Table 9.** Correlation matrix of independent variables used in overall sample (n= 2,254) (Part II)

|  | *France* | *Fraud* | *Israel* | *LnTA* | *Other* | *Restate* | *RM* | *UK* |
|---|---|---|---|---|---|---|---|---|
| France | 1.000 |  |  |  |  |  |  |  |
| Fraud | 0.000 | 1.000 |  |  |  |  |  |  |
| Israel | -0.009 | -0.033 | 1.000 |  |  |  |  |  |
| LnTA | *0.077 | *-0.145 | -0.031 | 1.000 |  |  |  |  |
| Other | -0.022 | 0.006 | -0.021 | *0.155 | 1.000 |  |  |  |
| Restate | -0.051 | *0.288 | -0.026 | 0.009 | -0.031 | 1.000 |  |  |
| RM | -0.024 | *0.102 | -0.022 | *-0.217 | -0.046 | -0.037 | 1.000 |  |
| UK | -0.010 | -0.048 | -0.009 | *0.120 | -0.022 | -0.042 | -0.005 | 1.000 |

*Notes: *Correlation is significant at the 0.01 level.*

**Table 10.** Polytomous regression (cumulative logit model) results (n=2,254)

| *Independent Variable* | *Expected Sign* | *Coefficient* | *Wald Chi-Square* | *p-value* |
|---|---|---|---|---|
| Intercept1 |  | -2.874 | 71.353 | 0.001 |
| Intercept2 |  | -3.958 | 129.614 | 0.001 |
| Intercept3 |  | -5.100 | 203.720 | 0.001 |
| Intercept4 |  | -8.713 | 308.286 | 0.001 |
| AuB8NUS | ? | 0.026 | 0.007 | 0.933 |
| AuNB8NUS | ? | 1.275 | 7.950 | 0.005 |
| AuNB8US | + | 1.897 | 113.755 | 0.000 |
| Bankrupt | + | 1.079 | 44.507 | 0.000 |
| Bermuda | ? | 0.229 | 0.172 | 0.679 |
| Canada | ? | 0.528 | 1.917 | 0.166 |
| China | + | 0.743 | 6.200 | 0.013 |
| Class | + | 0.010 | 54.565 | 0.000 |
| France | ? | -1.844 | 3.143 | 0.076 |
| Fraud | + | 2.579 | 383.035 | 0.000 |
| Israel | ? | -0.568 | 0.322 | 0.570 |
| LnTA | ? | -0.021 | 0.836 | 0.361 |
| Other | ? | 0.837 | 5.737 | 0.017 |
| Restate | + | 0.427 | 10.571 | 0.001 |
| RM | + | -0.123 | 0.212 | 0.645 |
| UK | ? | 0.584 | 0.708 | 0.400 |
| R-square | 35.59% |  |  |  |
| Max rescaled R-square | 44.27% |  |  |  |
| Proportional odds Chi-square | 286.007 (p < 0.01) |  |  |  |
| Wald Chi-square | 760.302 (p < 0.01) |  |  |  |

*Notes: Coefficients of variables with p-value < 0.05 are in bold*

**Table 11.** Polytomous results - other countries model (n=109) (Part I)

| *Independent Variable* | *Expected Sign* | *Coefficient* | *Wald Chi-Square* | *p-value* |
|---|---|---|---|---|
| Intercept1 |  | -1.197 | 0.569 | 0.450 |
| Intercept2 |  | -3.142 | 3.726 | 0.053 |
| Intercept3 |  | -3.355 | 4.228 | 0.040 |
| Intercept4 |  | -5.587 | 10.424 | 0.001 |
| AuB8US |  | 1.225 | 2.067 | 0.151 |
| AuNB8NUS | ? | 0.940 | 0.359 | 0.549 |
| AuNB8US | ? | 1.058 | 0.507 | 0.477 |
| BANKRUPT | + | 2.368 | 5.640 | 0.018 |
| CLASS | + | 0.023 | 10.038 | 0.002 |
| FRAUD | + | 4.337 | 26.637 | 0.000 |
| LnTA | ? | -0.150 | 2.111 | 0.146 |
| Restate | ? | -2.396 | 6.271 | 0.012 |
| RM6 | + | 0.161 | 0.004 | 0.951 |

**Table 11.** Polytomous results - other countries model (n=109) (Part II)

| Independent Variable | Expected Sign | Coefficient | Wald Chi-Square | p-value |
|---|---|---|---|---|
| R-square | 48.87% | | | |
| Max rescaled R-square | 59.52% | | | |
| Proportional odds Chi-square | 38.381 (p = 0.07) | | | |
| Wald Chi-square | 43.239 (p < 0.01) | | | |

*Notes: Coefficients of variables with p-value < 0.05 are in bold.*

**Table 12.** Polytomous results – China model (n=143)

| Independent Variables | Expected Sign | Coefficient | Wald Chi-Square | p-value |
|---|---|---|---|---|
| Intercept1 | | 3.880 | 3.671 | 0.055 |
| Intercept2 | | 2.134 | 1.133 | 0.288 |
| Intercept3 | | 0.928 | 0.216 | 0.643 |
| AuB8USCan | ? | 0.617 | 0.526 | 0.469 |
| AuNB8China | ? | 0.736 | 0.932 | 0.336 |
| AuNB8USCan | + | 1.508 | 8.841 | 0.003 |
| BANKRUPT | ? | 1.019 | 0.996 | 0.317 |
| CLASS | + | 0.010 | 3.036 | 0.082 |
| FRAUD | + | 2.441 | 30.852 | 0.000 |
| LnTA | ? | -0.525 | 9.601 | 0.002 |
| Restate | ? | -0.089 | 0.031 | 0.860 |
| RM6 | + | 0.890 | 4.678 | 0.030 |
| R-square | | 53.05% | | |
| Max-rescaled R square | | 58.12% | | |
| Proportional odds Chi-square | | 41.592 (p = 0.001) | | |
| Wald Chi-square | | 67.775 (p < 0.001) | | |

*Notes: Coefficients of variables with p-value < 0.05 are in bold.*

**Table 13.** Correlation matrix of independent variables used in China aggregate (total) settlement models or auditor settlement models (n=131) (Part I)

| | AuB8ChinaM | AuB8HKSAR | AuB8USCan | AudSettle | AuNB8HKSAR | AuNB8USCan | Class |
|---|---|---|---|---|---|---|---|
| AuB8ChinaM | 1.000 | | | | | | |
| AuB8HKSAR | ***-0.253 | 1.000 | | | | | |
| AuB8USCan | *-0.169 | *-0.150 | 1.000 | | | | |
| AudSettle | ***-0.253 | -0.020 | -0.014 | 1.000 | | | |
| AuNB8HKSAR | *-0.153 | -0.136 | -0.091 | 0.087 | 1.000 | | |
| AuNB8USCan | ***-0.461 | ***-0.409 | **-0.274 | **0.189 | ***-0.248 | 1.000 | |
| Class | -0.051 | -0.132 | *0.171 | 0.084 | 0.019 | 0.035 | 1.000 |
| DefaultCom | -0.134 | -0.046 | 0.052 | ***0.387 | *0.167 | 0.028 | -0.070 |
| Fraud | *-0.151 | **-0.205 | 0.022 | **0.175 | -0.015 | ***0.283 | 0.084 |
| LNTA | *0.168 | **0.195 | 0.140 | -0.132 | 0.035 | ***-0.394 | ***-0.323 |
| NoServeMgt | -0.097 | 0.079 | *-0.173 | *0.163 | 0.140 | 0.045 | 0.072 |
| Restate | -0.096 | -0.065 | -0.044 | 0.111 | ***0.231 | 0.034 | 0.047 |
| RM6 | -0.416 | -0.039 | **-0.186 | ***0.317 | 0.082 | ***0.444 | 0.002 |

**Table 13.** Correlation matrix of independent variables used in China aggregate (total) settlement models or auditor settlement models (n=131) (Part II)

| | DefaultCom | Fraud | LNTA | NoServeMgt | Restate | RM6 |
|---|---|---|---|---|---|---|
| DefaultCom | 1.000 | | | | | |
| Fraud | **0.212 | 1.000 | | | | |
| LNTA | **-0.182 | -0.097 | 1.000 | | | |
| NoServeMgt | *0.149 | 0.059 | 0.008 | 1.000 | | |
| Restate | -0.068 | 0.013 | -0.121 | 0.125 | 1.000 | |
| RM6 | *0.151 | ***0.285 | ***-0.285 | ***0.349 | 0.055 | 1.000 |

*Notes: *, **, *** Correlations are significant at the 0.1, 0.05, and 0.01 levels respectively.*

**Table 14A.** China companies: multiple linear regressions on aggregate (total) private securities class action settlement amount (n=131) (Part I)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| AuB8HKSAR | 5379395 (1.17) | 5398833 (1.16) | *7866981 (1.7) | *7985870 (1.72) | *8053193 (1.72) | *7788559 (1.67) |
| AuB8USCan | 9237059 (1.59) | 9173170 (1.58) | *10113679 (1.78) | *10049163 (1.77) | *10026982 (1.76) | *9546262 (1.68) |
| AudSettle | ***16391274 (3.84) | ***17034091 (3.81) | ***18617245 (4.46) | ***18222179 (4.38) | ***17652646 (4.26) | ***17247039 (4.17) |
| AuNB8HKSAR | -2075709 (-0.32) | -2632018 (-0.41) | 821726 (0.13) | 1178652 (0.18) | 1023734 (0.16) | 1278064 (0.2) |
| AuNB8USCan | -4742441 (-1.12) | -4195010 (-0.95) | -231865 (-0.05) | 728631 (0.16) | 1450874 (0.3) | 963915 (0.2) |

**Table 14A.** China companies: multiple linear regressions on aggregate (total) private securities class action settlement amount (n=131) (Part II)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| Class | ***150859 | ***144164 | ***145072 | ***148947 | ***149894 | ***152672 |
| | (3.44) | (3.26) | (3.44) | (3.52) | (3.54) | (3.59) |
| DefaultCom | *-9913958 | *-8816586 | *-9591017 | *-9443929 | *-9255325 | *-8567018 |
| | (-1.83) | (-1.69) | (-1.88) | (-1.85) | (-1.81) | (-1.67) |
| Fraud | 4641409 | 4871251 | *6462471 | 5890819 | 5755311 | 5956717 |
| | (1.25) | (1.31) | (1.75) | (1.61) | (1.57) | (1.62) |
| LNTA | *2155453 | 2053755 | 1614647 | 1685724 | 1759231 | 1767922 |
| | (1.73) | (1.64) | (1.31) | (1.38) | (1.43) | (1.44) |
| NoServeMgt | 1872187 | 2159451 | 4668194 | 4130428 | 3830480 | 3550429 |
| | (0.58) | (0.67) | (1.4) | (1.27) | (1.18) | (1.1) |
| Restate | -5344953 | -5231130 | -6063273 | -6295207 | -5285647 | -4839074 |
| | (-1.18) | (-1.15) | (-1.36) | (-1.41) | (-1.19) | (-1.09) |
| RM | 4287913 | -323281 | **-8616713 | **-8581227 | **-8463330 | **-8219863 |
| | (0.71) | (-0.08) | (-2.33) | (-2.31) | (-2.17) | (-2.13) |
| Intercept | **-32129570 | **-30779666 | *-26251441 | *-26941312 | *-27804441 | *-27686107 |
| | (-2.08) | (-1.97) | (-1.73) | (-1.78) | (-1.83) | (-1.82) |
| F-Value | 5.03 | 4.96 | 5.65 | 5.63 | 5.55 | 5.53 |
| R-Square | 33.83% | 33.55% | 36.48% | 36.42% | 36.09% | 36.01% |

*Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.*

**Table 14B.** China companies: multiple linear regressions on aggregate (total) private securities class action settlement amount (n=131)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| AuB8ChinaM | -9237059 | -9173170 | *-10113679 | *-10049163 | *-10026982 | *-9546262 |
| | (-1.59) | (-1.58) | (-1.78) | (-1.77) | (-1.76) | (-1.68) |
| AuB8HKSAR | -3857664 | -3774337 | -2246697 | -2063293 | -1973789 | -1757704 |
| | (-0.63) | (-0.61) | (-0.37) | (-0.34) | (-0.33) | (-0.29) |
| AudSettle | ***16391274 | ***17034091 | ***18617245 | ***18222179 | ***17652646 | ***17247039 |
| | (3.84) | (3.81) | (4.46) | (4.38) | (4.26) | (4.17) |
| AuNB8HKSAR | -11312767 | -11805189 | -9291953 | -8870511 | -9003249 | -8268199 |
| | (-1.53) | (-1.6) | (-1.28) | (-1.21) | (-1.23) | (-1.12) |
| AuNB8USCan | **-13979500 | **-13368181 | *-10345544 | -9320532 | -8576108 | -8582348 |
| | (-2.5) | (-2.33) | (-1.85) | (-1.63) | (-1.46) | (-1.45) |
| Class | ***150859 | ***144164 | ***145072 | ***148947 | ***149894 | ***152672 |
| | (3.44) | (3.26) | (3.44) | (3.52) | (3.54) | (3.59) |
| DefaultCom | *-9913958 | *-8816586 | *-9591017 | *-9443929 | *-9255325 | *-8567018 |
| | (-1.83) | (-1.69) | (-1.88) | (-1.85) | (-1.81) | (-1.67) |
| Fraud | 4641409 | 4871251 | *6462471 | 5890819 | 5755311 | 5956717 |
| | (1.25) | (1.31) | (1.75) | (1.61) | (1.57) | (1.62) |
| LNTA | *2155453 | 2053755 | 1614647 | 1685724 | 1759231 | 1767922 |
| | (1.73) | (1.64) | (1.31) | (1.38) | (1.43) | (1.44) |
| NoServeMgt | 1872187 | 2159451 | 4668194 | 4130428 | 3830480 | 3550429 |
| | (0.58) | (0.67) | (1.4) | (1.27) | (1.18) | (1.1) |
| Restate | -5344953 | -5231130 | -6063273 | -6295207 | -5285647 | -4839074 |
| | (-1.18) | (-1.15) | (-1.36) | (-1.41) | (-1.19) | (-1.09) |
| RM | 4287913 | -323281 | **-8616713 | **-8581227 | **-8463330 | **-8219863 |
| | (0.71) | (-0.08) | (-2.33) | (-2.31) | (-2.17) | (-2.13) |
| Intercept | -22892511 | -21606496 | -16137762 | -16892149 | -17777459 | -18139845 |
| | (-1.43) | (-1.34) | (-1.02) | (-1.07) | (-1.13) | (-1.15) |
| F-Value | 5.03 | 4.96 | 5.65 | 5.63 | 5.55 | 5.53 |
| R-Square | 33.83% | 33.55% | 36.48% | 36.42% | 36.09% | 36.01% |

*Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.*

**Table 15A.** China companies: logistic regressions on auditor private securities class action settlement amounts (n=131) (Part I)

| Variable | RM2 Model Coefficient (Wald Chi-sq.) | RM4 Model Coefficient (Wald Chi-sq.) | RM6 Model Coefficient (Wald Chi-sq.) | RM8 Model Coefficient (Wald Chi-sq.) | RM10 Model Coefficient (Wald Chi-sq.) | RM12 Model Coefficient (Wald Chi-sq.) |
|---|---|---|---|---|---|---|
| AuB8HKSAR | 12.188 | 11.472 | 11.633 | 11.726 | 11.905 | 12.125 |
| | (-0.010) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| AuB8USCan | 11.620 | 11.376 | 11.502 | 11.548 | 11.607 | 11.666 |
| | (0.000) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| AuNB8HKSAR | 12.073 | 11.404 | 11.149 | 11.226 | 11.466 | 11.707 |
| | (0.005) | (0.005) | (0.004) | (0.004) | (0.004) | (0.005) |
| AuNB8USCan | 12.427 | 11.903 | 12.018 | 12.020 | 12.156 | 12.450 |
| | (0.005) | (0.006) | (0.005) | (0.005) | (0.005) | (0.005) |
| Class | *0.014 | **0.024 | 0.012 | 0.012 | 0.011 | 0.011 |
| | (3.114) | (6.377) | (2.358) | (2.161) | (2.122) | (2.115) |

**Table 15A.** China companies: logistic regressions on auditor private securities class action settlement amounts (n=131) (Part II)

| Variable | RM2 Model Coefficient (Wald Chi-sq.) | RM4 Model Coefficient (Wald Chi-sq.) | RM6 Model Coefficient (Wald Chi-sq.) | RM8 Model Coefficient (Wald Chi-sq.) | RM10 Model Coefficient (Wald Chi-sq.) | RM12 Model Coefficient (Wald Chi-sq.) |
|---|---|---|---|---|---|---|
| DefaultCom | ***2.212 | ***2.774 | ***2.788 | ***2.703 | ***2.607 | ***2.534 |
|  | (7.700) | (9.914) | (11.288) | (11.126) | (10.925) | (10.728) |
| Fraud | 0.311 | 0.196 | 0.123 | 0.244 | 0.300 | 0.348 |
|  | (0.256) | (0.091) | (0.040) | (0.163) | (0.248) | (0.323) |
| LNTA | 0.076 | 0.359 | 0.160 | 0.117 | 0.070 | 0.040 |
|  | (0.091) | (1.469) | (0.314) | (0.176) | (0.068) | (0.024) |
| NoServeMgt | 0.275 | 0.564 | -0.074 | 0.135 | 0.275 | 0.353 |
|  | (0.159) | (0.578) | (0.010) | (0.036) | (0.158) | (0.264) |
| Restate | 0.917 | *1.561 | 1.166 | 1.166 | 1.014 | 0.980 |
|  | (1.629) | (3.488) | (2.553) | (2.508) | (2.029) | (1.887) |
| RM | 1.313 | ***2.852 | *1.462 | 1.153 | 0.746 | 0.299 |
|  | (2.423) | (11.226) | (3.618) | (2.352) | (0.948) | (0.156) |
| Intercept | -16.159 | -21.069 | -17.244 | -16.717 | -16.089 | -15.698 |
|  | (0.009) | (0.018) | (0.010) | (0.010) | (0.009) | (0.008) |
| Wald Chi-Square | 16.840 | 19.221 | 16.752 | 16.348 | 15.954 | 15.707 |
| R-Square | 23.69% | 30.64% | 24.71% | 23.84% | 22.89% | 22.39% |
| Maxrescaled R-Square | 38.57% | 49.89% | 40.24% | 38.81% | 37.27% | 36.46% |

*Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.*

**Table 15B.** China companies: logistic regressions on auditor private securities class action settlement amounts (n=131)

| Variable | RM2 Model Coefficient (Wald Chi-sq.) | RM4 Model Coefficient (Wald Chi-sq.) | RM6 Model Coefficient (Wald Chi-sq.) | RM8 Model Coefficient (Wald Chi-sq.) | RM10 Model Coefficient (Wald Chi-sq.) | RM12 Model Coefficient (Wald Chi-sq.) |
|---|---|---|---|---|---|---|
| AuB8ChinaM | -11.620 | -12.376 | -12.502 | -11.548 | -11.607 | -11.666 |
|  | (0.005) | (0.002) | (0.002) | (0.005) | (0.005) | (0.005) |
| AuB8HKSAR | 0.569 | 0.096 | 0.132 | 0.179 | 0.299 | 0.459 |
|  | (0.249) | (0.005) | (0.013) | (0.023) | (0.065) | (0.154) |
| AuNB8HKSAR | 0.454 | 0.027 | -0.353 | -0.322 | -0.141 | 0.040 |
|  | (0.130) | (0.000) | (0.074) | (0.060) | (0.012) | (0.001) |
| AuNB8USCan | (0.807) | 0.527 | 0.516 | 0.473 | 0.550 | 0.784 |
|  | (0.577) | (0.187) | (0.221) | (0.185) | (0.240) | (0.479) |
| Class | *0.014 | **0.024 | 0.012 | 0.012 | 0.011 | 0.011 |
|  | (3.114) | (6.377) | (2.358) | (2.161) | (2.122) | (2.115) |
| DefaultCom | ***2.212 | ***2.774 | ***2.788 | ***2.703 | ***2.607 | ***2.534 |
|  | (7.700) | (9.914) | (11.288) | (11.126) | (10.925) | (10.728) |
| Fraud | 0.311 | 0.196 | 0.123 | 0.244 | 0.300 | 0.348 |
|  | (0.256) | (0.091) | (0.040) | (0.163) | (0.248) | (0.323) |
| LNTA | 0.076 | 0.359 | 0.160 | 0.117 | 0.070 | 0.040 |
|  | (0.091) | (1.469) | (0.314) | (0.176) | (0.068) | (0.024) |
| NoServeMgt | 0.275 | 0.564 | -0.074 | 0.135 | 0.275 | 0.353 |
|  | (0.159) | (0.578) | (0.010) | (0.036) | (0.158) | (0.264) |
| Restate | 0.917 | *1.561 | 1.177 | 1.166 | 1.014 | 0.980 |
|  | (1.629) | (3.488) | (2.553) | (2.508) | (2.029) | (1.887) |
| RM6 | 1.313 | ***2.852 | *1.4617 | 1.153 | 0.746 | 0.299 |
|  | (2.423) | (11.226) | (3.618) | (2.352) | (0.948) | (0.156) |
| Intercept | -4.539 | **-9.693 | -5.742 | -5.169 | -4.483 | -4.032 |
|  | (1.713) | (4.726) | (2.119) | (1.809) | (1.488) | (1.300) |
| Wald Chi-Square | 16.840 | 19.218 | 16.750 | 16.348 | 15.954 | 15.707 |
| R-Square | 23.69% | 30.64% | 24.71% | 23.84% | 22.89% | 22.39% |
| Maxrescaled R-Square | 38.57% | 49.89% | 40.24% | 38.81% | 37.27% | 36.46% |

*Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.*

**Table 15C.** China companies: multiple linear regressions on auditor private securities class action settlement amounts (n=131) (Part I)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| AuB8ChinaM | **-8403784 | **-8353483 | **-8649946 | **-8616091 | **-8616862 | **-8500606 |
|  | (-2.44) | (-2.43) | (-2.50) | (-2.49) | (-2.50) | (-2.47) |
| AuB8HKSAR | **-7264906 | **-7664642 | *-6816956 | *-6798604 | *-6750847 | *-6650291 |
|  | (-2.00) | (-2.10) | (-1.87) | (-1.86) | (-1.84) | (-1.81) |
| AuNB8HKSAR | *-8388474 | **-9124970 | *-8172730 | *-8107487 | *-8088156 | *-7818876 |
|  | (-1.91) | (-2.09) | (-1.85) | (-1.83) | (-1.82) | (-1.74) |
| AuNB8USCan | ***-9264868 | ***-9767548 | **-8047839 | **-7860013 | **-7612343 | **-7497819 |
|  | (-2.79) | (-2.87) | (-2.37) | (-2.26) | (-2.13) | (-2.1) |
| Class | **56843 | **57412 | **53130 | **53891 | **54074 | **54857 |
|  | (2.19) | (2.22) | (2.08) | (2.11) | (2.11) | (2.14) |

**Table 15C.** China companies: multiple linear regressions on auditor private securities class action settlement amounts (n=131) (Part II)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| DefaultCom | -1847310 | -1355607 | -832044 | -837860 | -853586 | -717936 |
|  | (-0.60) | (-0.46) | (-0.29) | (-0.29) | (-0.29) | (-0.25) |
| Fraud | *4379565 | *4356301 | **4956702 | **4805664 | **4787105 | **4861187 |
|  | (1.98) | (1.97) | (2.21) | (2.16) | (2.15) | (2.18) |
| LNTA | 896365 | 937525 | 714235 | 736003 | 747846 | 743013 |
|  | (1.21) | (1.26) | (0.96) | (0.99) | (1.01) | (1.00) |
| NoServeMgt | 1829585 | 2042632 | 2691558 | 2537342 | 2494254 | 2456412 |
|  | (0.95) | (1.07) | (1.33) | (1.28) | (1.27) | (1.26) |
| Restate | -1172408 | -877214 | -1167167 | -1223457 | -1010134 | -902332 |
|  | (-0.44) | (-0.33) | (-0.44) | (-0.46) | (-0.38) | (-0.34) |
| RM Variables | 3328691 | 2507324 | -2044337 | -1944564 | -2074832 | -2225835 |
|  | (0.94) | (1.06) | (0.93) | (0.87) | (-0.88) | (-0.95) |
| Intercept | -6872236 | -7626548 | -4622406 | -4861980 | -4996711 | -4998534 |
|  | (-0.72) | (-0.80) | (-0.48) | (-0.51) | (-0.52) | (-0.53) |
| F-Value | 2.53 | 2.56 | 2.53 | 2.52 | 2.52 | 2.53 |
| R-Square | 18.96% | 19.13% | 18.95% | 18.88% | 18.89% | 18.98% |

Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.

**Table 15D.** China companies: multiple linear regressions on auditor private securities class action settlement amounts (n=131)

| Variable | RM2 Model Coefficient (t-statistics) | RM4 Model Coefficient (t-statistics) | RM6 Model Coefficient (t-statistics) | RM8 Model Coefficient (t-statistics) | RM10 Model Coefficient (t-statistics) | RM12 Model Coefficient (t-statistics) |
|---|---|---|---|---|---|---|
| AuB8ChinaM | **-8403784 | **-8353483 | **-8649946 | **-8616091 | **-8616862 | **-8500606 |
|  | (-2.44) | (-2.43) | (-2.50) | (-2.49) | (-2.50) | (-2.47) |
| AuB8HKSAR | **-7264906 | **-7664642 | *-6816956 | *-6798604 | *-6750847 | *-6650291 |
|  | (-2.00) | (-2.10) | (-1.87) | (-1.86) | (-1.84) | (-1.81) |
| AuNB8HKSAR | *-8388474 | **-9124970 | *-8172730 | *-8107487 | *-8088156 | *-7818876 |
|  | (-1.91) | (-2.09) | (-1.85) | (-1.83) | (-1.82) | (-1.74) |
| AuNB8USCan | ***-9264868 | ***-9767548 | **-8047839 | **-7860013 | **-7612343 | **-7497819 |
|  | (-2.79) | (-2.87) | (-2.37) | (-2.26) | (-2.13) | (-2.1) |
| Class | **56843 | **57412 | **53130 | **53891 | **54074 | **54857 |
|  | (2.19) | (2.22) | (2.08) | (2.11) | (2.11) | (2.14) |
| DefaultCom | -1847310 | -1355607 | -832044 | -837860 | -853586 | -717936 |
|  | (-0.60) | (-0.46) | (-0.29) | (-0.29) | (-0.29) | (-0.25) |
| Fraud | *4379565 | *4356301 | **4956702 | **4805664 | **4787105 | **4861187 |
|  | (1.98) | (1.97) | (2.21) | (2.16) | (2.15) | (2.18) |
| LNTA | 896365 | 937525 | 714235 | 736003 | 747846 | 743013 |
|  | (1.21) | (1.26) | (0.96) | (0.99) | (1.01) | (1.00) |
| NoServeMgt | 1829585 | 2042632 | 2691558 | 2537342 | 2494254 | 2456412 |
|  | (0.95) | (1.07) | (1.33) | (1.28) | (1.27) | (1.26) |
| Restate | -1172408 | -877214 | -1167167 | -1223457 | -1010134 | -902332 |
|  | (-0.44) | (-0.33) | (-0.44) | (-0.46) | (-0.38) | (-0.34) |
| RM Variables | 3328691 | 2507324 | -2044337 | -1944564 | -2074832 | -2225835 |
|  | (0.94) | (1.06) | (0.93) | (0.87) | (-0.88) | (-0.95) |
| Intercept | -6872236 | -7626548 | -4622406 | -4861980 | -4996711 | -4998534 |
|  | (-0.72) | (-0.80) | (-0.48) | (-0.51) | (-0.52) | (-0.53) |
| F-Value | 2.53 | 2.56 | 2.53 | 2.52 | 2.52 | 2.53 |
| R-Square | 18.96% | 19.13% | 18.95% | 18.88% | 18.89% | 18.98% |

Notes: *, **, *** Significant at the 0.1, 0.05, and 0.01 levels respectively.